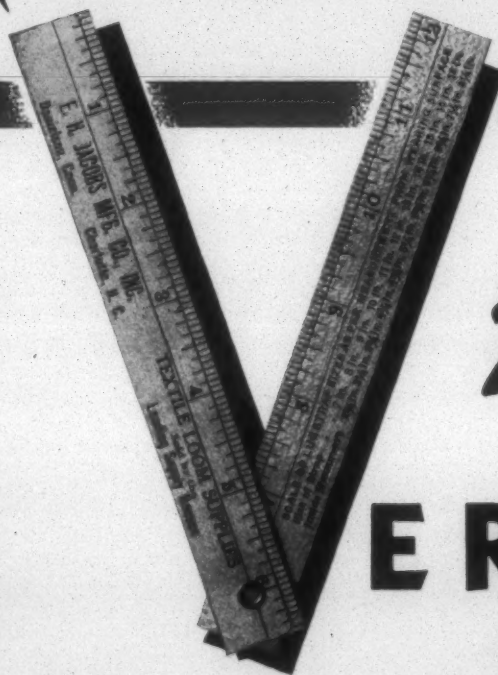


TEXTILE BULLETIN

VOL. 67

OCTOBER 15, 1944

NO. 4



JACOBS

Reinforced

VERY BEST LUG STRAPS

*To get one of these
handy lug strap rulers
free, write on your letter-
head to E.H. Jacobs Co.

**These Lug Straps meet every require-
ment for efficient loom operation.**

Specially reinforced at wear and stress points, the Reinforced "Verybest" Lug Strap is fast becoming standard in efficient mills throughout the country.

The picking motion of all Jacobs equipment is right for the highest speed looms in use today, or on designers' drawing boards for post-war use. In fact, some loom designs are being engineered to accord with specifications for Jacobs equipment.

• Seventy-five years in the business



E. H. JACOBS MFG. CO.

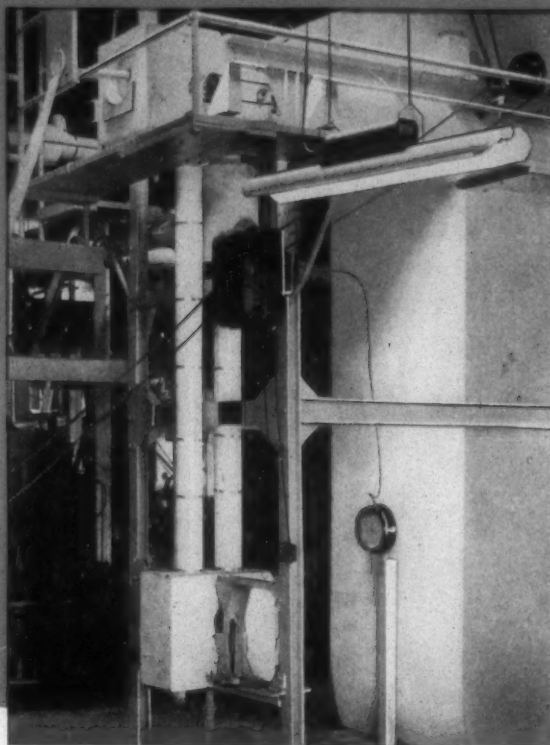
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DUPONT *CONTINUOUS* PEROXIDE BLEACH

TWO-HOUR
HIGH SPEED PROCESS
GIVES COLORED
YARN SHIRTINGS
GOOD WHITE GROUNDS
...and protects the dyes!



GOOD WHITE GROUNDS . . . maximum protection for the dyes. There, in a nutshell, is the big problem in bleaching colored yarn shirtings.

For this production job, Du Pont recommends Continuous Peroxide Bleaching. Developed through research, it is an important contribution to the textile industry. Reports from leading mills using the new process offer ample evidence that it is entirely practical.

The chief advantage of the process is the fact that it cuts bleaching time from an eight- or fourteen-hour job to a two-hour operation. What's more, it allows a *continuous* flow of material that can be geared to your production line.

Flexibility is a feature of the Du Pont Continuous Process—to switch from fabric to fabric is an easy matter. Not only that but you have

complete control over the various bleaching factors. And you can produce a high-quality, uniform bleach with a minimum of seconds and rejects.

Recognized textile finishing machinery manufacturers are building the equipment following designs patented by Du Pont. Get more information about the use of peroxides in continuous bleaching by writing to E. I. du Pont de Nemours & Co. (Inc.), Electro-chemicals Department, Wilmington 98, Delaware.

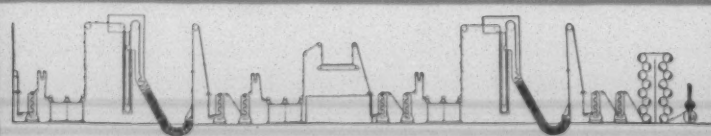
✓ **THESE FEATURES**

TWO-HOUR BLEACH	HIGH QUALITY
ECONOMICAL	UNIFORM BLEACH
FLEXIBLE	PROTECTS DYES
CONTROLLED	
MINIMUM SECONDS AND REJECTS	



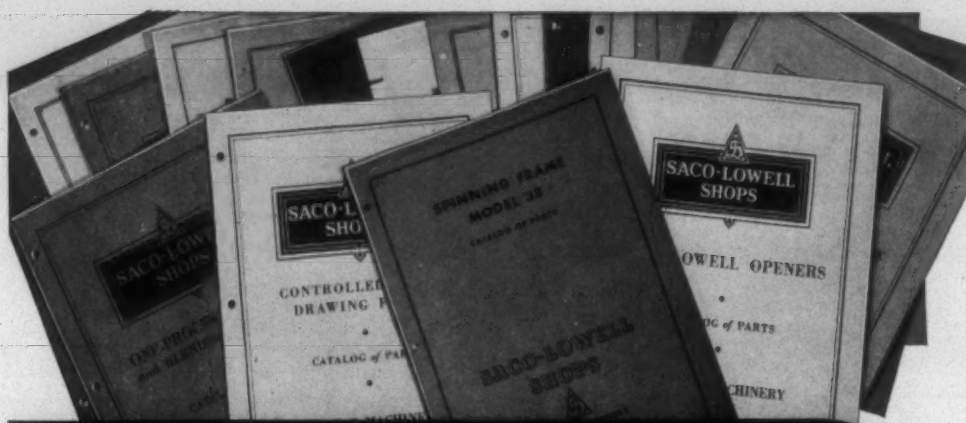
DU PONT PEROXIDES

Better Things for Better Living . . . Through Chemistry



Flow plan of a typical Du Pont continuous unit

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These catalogs contain the complete list of genuine Repair Parts for Saco-Lowell equipment. They are fully illustrated with numbered diagrams and instructions for ordering. To eliminate unnecessary delays, inconvenience and expense when ordering supplies, your Purchasing Department, Store Keepers and Overseers should have a set of these catalogs handy. Check over the list at the right and order as many sets as you need to cover all the Saco-Lowell equipment you have in operation. We'll send them to you promptly.

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60 BATTERYMARCH STREET, BOSTON, MASSACHUSETTS

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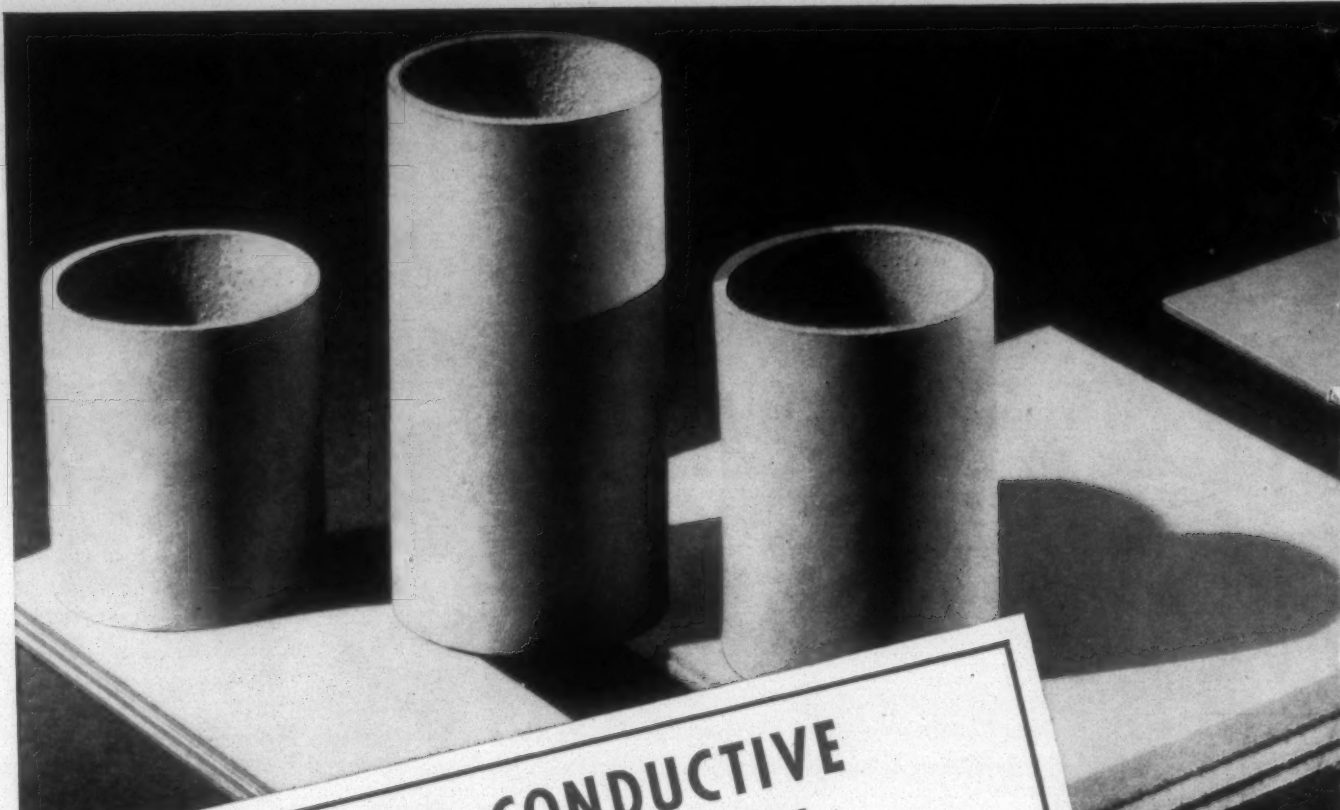
Atlanta

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TB-10-44



ELECTRO-CONDUCTIVE and HYGROSCOPIC

... Two Words Which Explain Why Lawrence Chrome Is First Choice, More Often, for Aprons

Lawrence Chrome Leather relieves you of troubles caused by static because its mineral content—a chrome compound—tends to carry off the static electricity that the yarn has collected. No other material, leather or other substance commonly used for aprons, has this important property.

Another reason why Lawrence Chrome reduces static troubles is that its pores are impregnated with a special *hygroscopic* ingredient, which tends to sponge up moisture, further increasing the ability of the leather to carry off static.

With Lawrence Chrome Aprons on your spinning and roving frames—and chrome-tanned Spinna Calf on your rolls—you can expect less tendency of the yarn to separate—less “fly”, less waste—and a freedom from “crazy” yarn, puffing open after leaving the front rolls.

More Uniform Drafting—Cleaner Yarn
Here are more reasons why Lawrence Chrome is the choice of more mills than any other type:

1. Its smooth, high-friction surface holds the fibres—even the shortest—in line.
2. Its resiliency causes it to keep its shape, resisting the tendency to “bell out” with pressure of the traversing yarn.
3. Its porous construction absorbs oily and gummy deposits, leaving none on the surface to spoil the yarn.

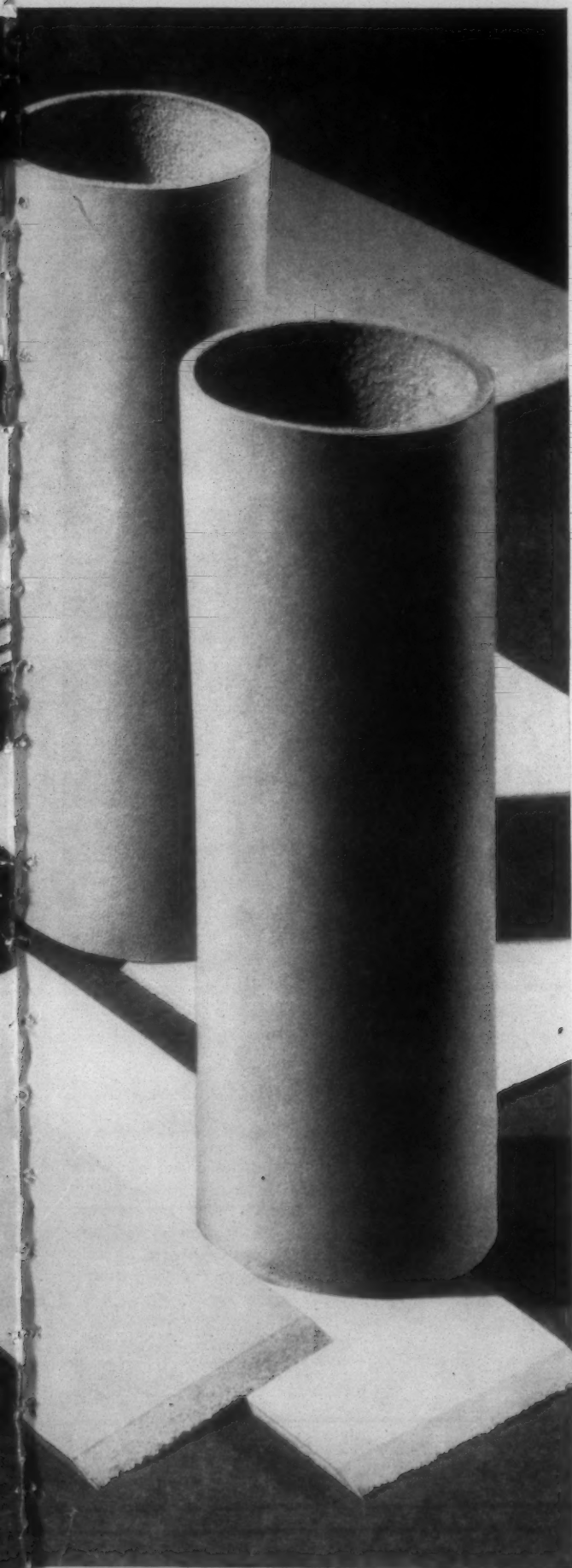
And, of course, Lawrence Chrome has the big advantage of being furnished *open-end*. You can make quick individual replacements as needed, even in bottom positions, without having to tear down the frames or mix up apron materials.

Specify Lawrence Chrome for your next aprons.

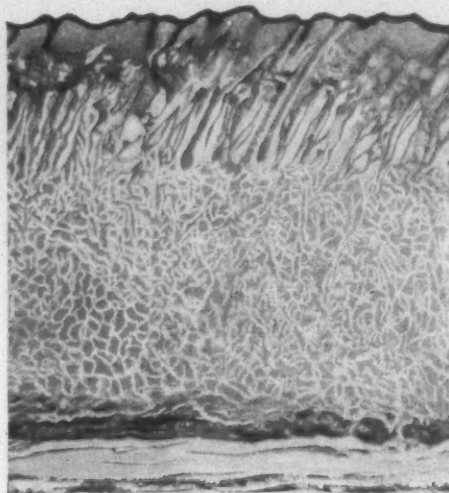
LAWRENCE **CHROME** LEATHER

1st Choice for Aprons

A. C. LAWRENCE LEATHER COMPANY
PEABODY, MASS. GREENVILLE, S. C.



For Roll Coverings USE THE MATERIAL WITH "MUSCLES"



Resiliency . . . give and take . . . stretch and recover — that's Spinna Calf, the material that retains its smooth, high-friction surface, longer.

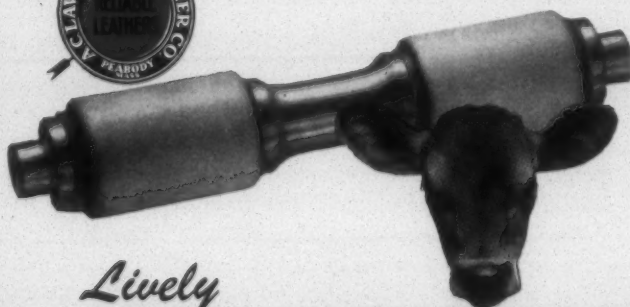
You'll have less trouble from hard ends, less hollowing-out, longer roll life . . . if you specify "Spinna Calf", because its "muscles" of tough, springy fibres adapt themselves to momentary pressure and strain, then resume their original shape. No other material has the resiliency of Lawrence's Spinna Calf — it's "triple-resilient"*

Static troubles are reduced, too, because Spinna Calf is *mineral-tanned*.

So have *your* roll coverer use Spinna — the leather *he* will like, too — because its quality is uniform.

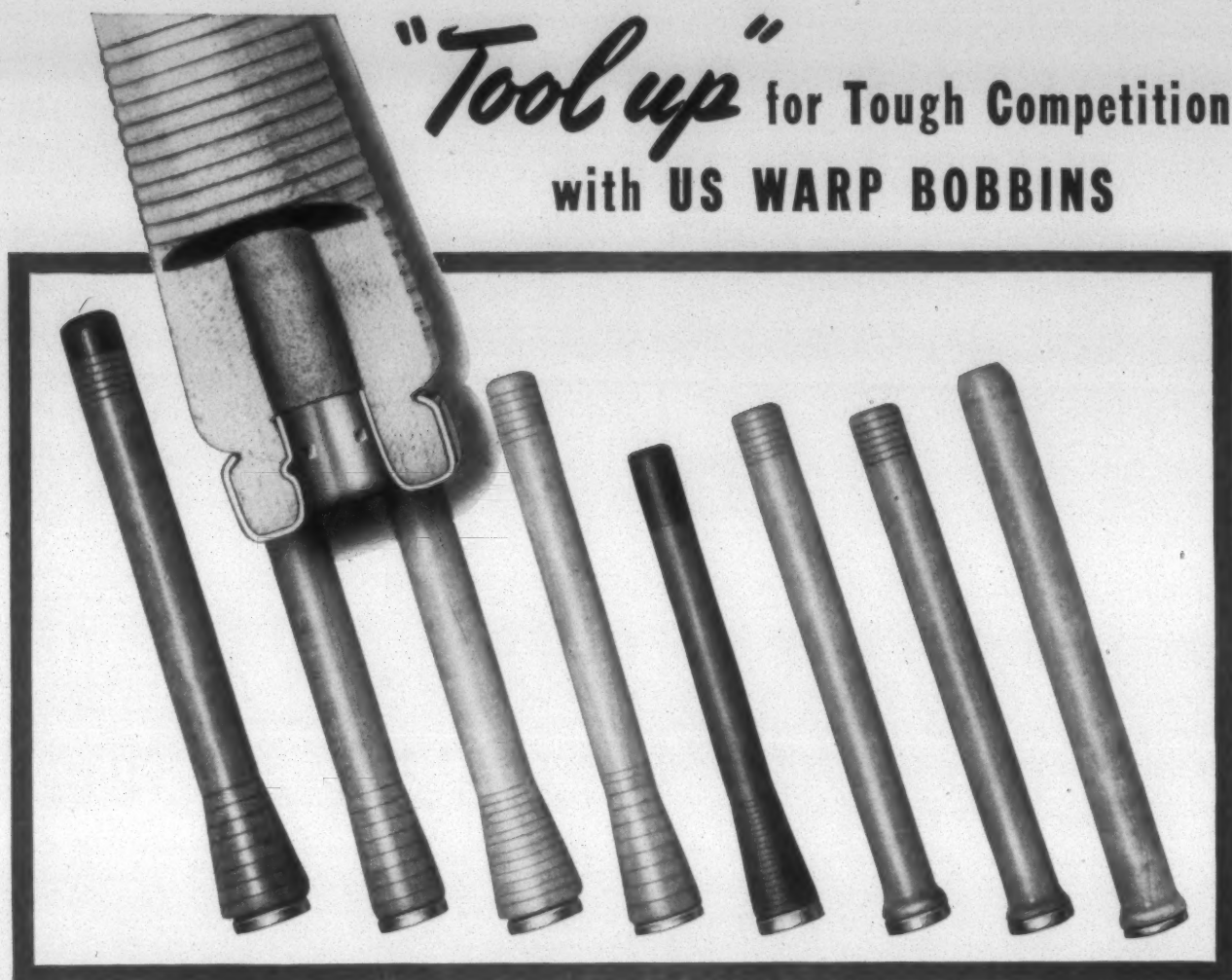
- *1. The individual fibres compress and recover.
2. The fibre network adjusts itself to strain, and recovers.
3. The air in between fibres is expelled, then returns.

No other material has all three forms of resiliency plus Spinna Calf's strong wearing surface.



Lively
SPINNA CALF
ROLL COVERINGS

it's Triple Resilient



The day will soon come when you will have to count on every bit of your mill equipment to help you keep costs in line with tough competition.

U S Warp Bobbins in any style will deliver top value in dependable service. But selecting bobbins with *extra* built-in endurance is a wise economy farsighted mill men won't overlook.

At slight extra initial cost, the U S Warp Bobbin with combination brass shield and bushing gives you year after year of trouble-free performance, — actually saves you money in the long run.

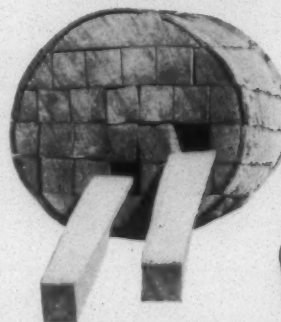
They resist the wear that eventually loosens unprotected bobbins and leads to vibration, and breakage, reduced production. They do not warp and “freeze” on spindles: reaming expense is avoided. The base, protected against splintering, splitting, and warping, always seats at the proper point on the spindle.

Higher spindle speeds and heavier packages will generate extra heat in already hot spinning rooms, another reason why you'll want these bobbins built to “take it”.

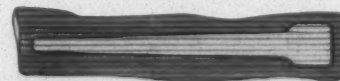
Special combination bushings and shields on U S Warp Bobbins can be supplied for mills equipped with the Barber-Colman system of spooling and warping.

Talk to a U S representative about your warp bobbin requirements. He can show you just what you need — in Bobbins — and in Cones, Rolls, Shuttles, Spools, Tubes, or other U S products.

The “Split Stock” process makes U S Bobbins Smoother — Stronger — Better Balanced

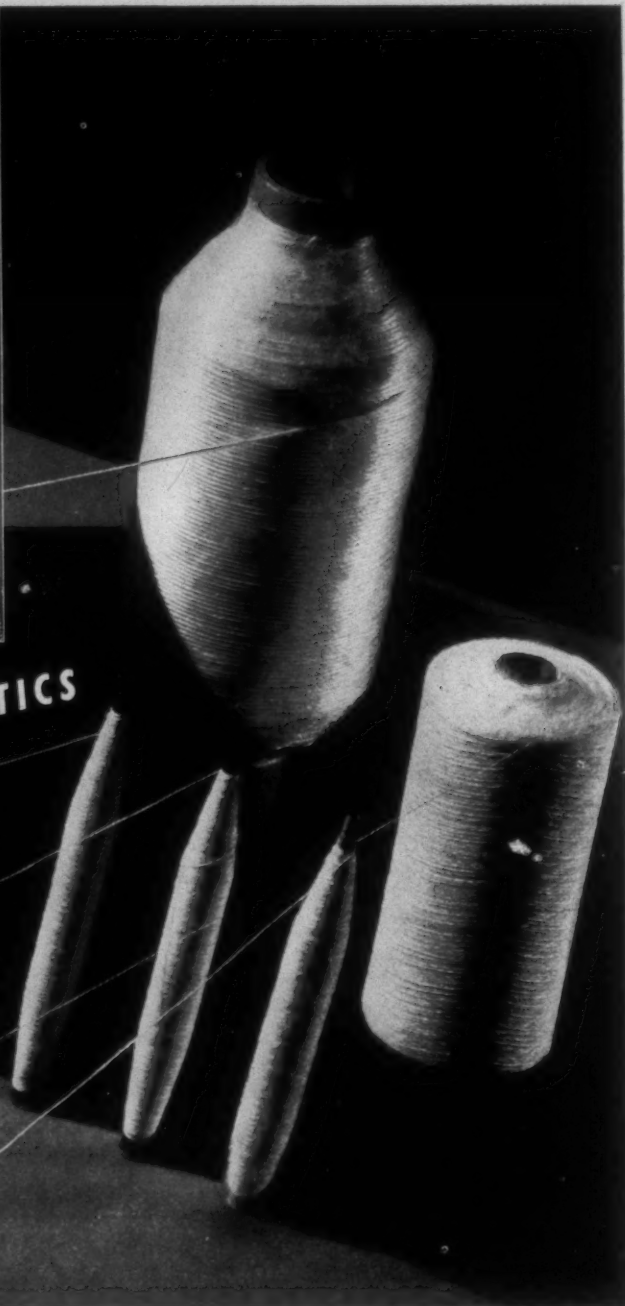
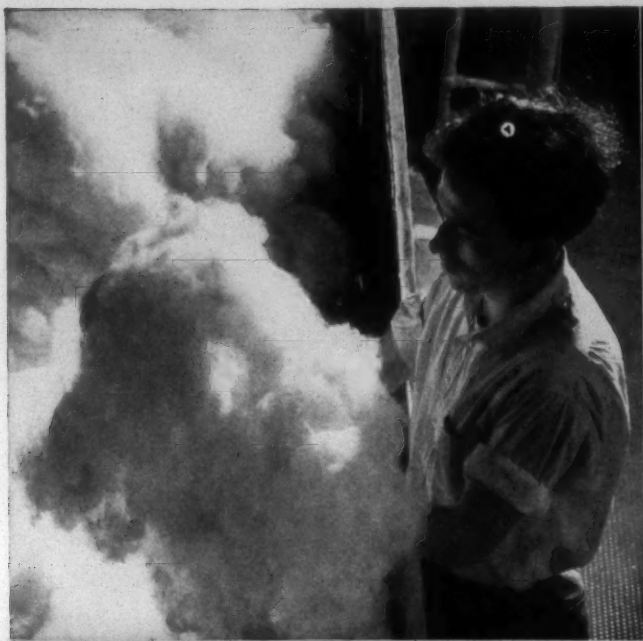


Splitting the stock makes sure the bobbin is “centered on the grain” for turning. With sawed stock, cross grain often causes weakness, splintering, unbalance. Specify U S Bobbins for superior performance, longer service life.



U S BOBBIN & SHUTTLE CO.
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BEFORE GOING INTO SYNTHETICS
CALL ON EXPERIENCE*
AVOID EXPERIMENTS

Photographs used thru courtesy of American Viscose Corp., N. Y.

* *In designing the specialized equipment necessary to blend, prepare and spin synthetics, Saco-Lowell has acquired an invaluable knowledge of these fibers . . . their characteristics, reactions and uses.*

While we cannot supply you at present with new machinery which we have designed and perfected for handling synthetics, we can tell you what this new equipment is like, what you may expect of it, and what further research is in process or planned. If you intend to enter this growing and bright-future field, now is the time to get your facts . . . to make your plans. Our engineers can be of great assistance to you in this preliminary work, and are available for consultation now.

Saco-Lowell Shops

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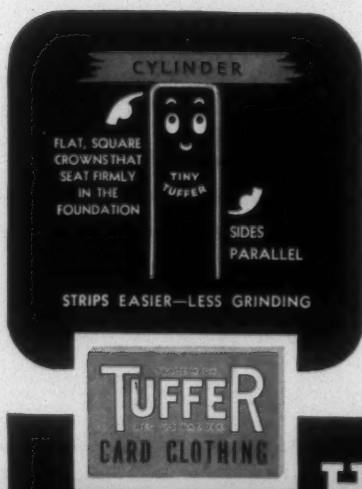
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Folks, I'm "Tiny Tuffer"

... spokesman for TUFFERIZED Card Clothing



My story means money in your pocket, higher production, more uniform carding, and a finer finish to your yarns.

Here's why. Our flat, square crowns snuggle firmly into the foundation when clothed correctly and our sides remain parallel at all times. Our points stay sharp longer because they keep in position and avoid injury in stripping. Consequently less frequent grinding is required.

All of which means, to get the most for your money standardize on TUFFER products.

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Card Clothing for Woolen, Worsted, Cotton, Asbestos and Silk Cards • Napper Clothing, Brush Clothing, Strickles, Emery Fillets. Top Flats Recovered and extra sets loaned at all plants. Lickerins and Garnet Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plant • Midgley Patented, and Howard's Special Hand Stripping Cards • Inserted Eye & Regular Wire Heddles

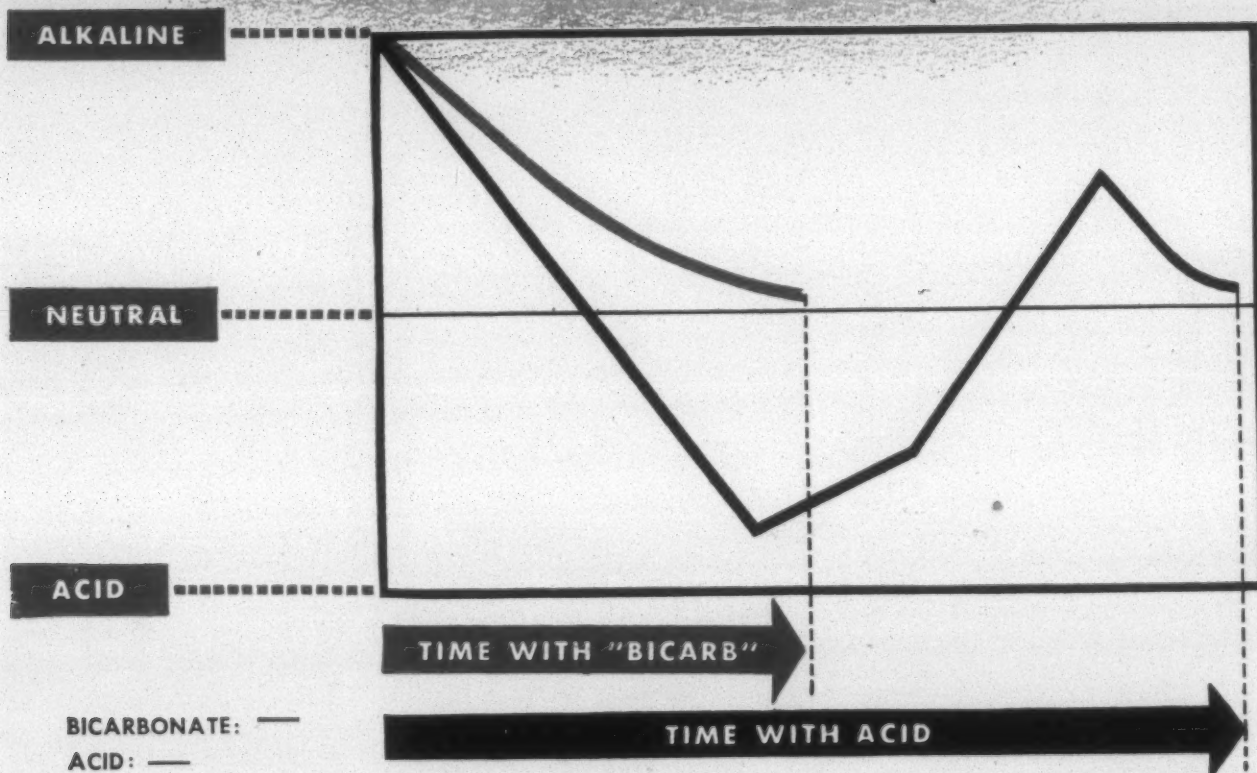
HOWARD BROS. MFG. CO.

WORCESTER, MASSACHUSETTS

Southern Plants: Atlanta, Ga., Gastonia, N. C. Branch Offices: Philadelphia, Dallas. Canadian Agents: Colwool Accessories, Ltd., Toronto 2

USE "BICARB"

TO REMOVE CAUSTIC!*



A NEW MATHIESON DEVELOPMENT

Eliminating acid's disadvantages, bicarbonate of soda effectively removes caustic by changing it into sodium carbonate or soda ash.

Commercially developed by Mathieson, this new process achieves decided advantages over customary acid neutralization:

- acid resistant equipment not required.
- no health or other hazards involved.
- production speeded by elimination of additional steps necessitated by acid process.
- careful chemical control unnecessary.
- goods are washed in hot water and treated in hot bicarbonate bath, which makes them whiter, softer and highly absorbent.

Removal of caustic with bicarbonate is applied (1) after scouring on continuous boil-off machines, (2) after scouring in jigs, (3) after warp mercerizing of yarn, (4) after skein mercerizing of yarn, (5) after mercerizing of piece goods, (6) after kier boiling, and (7) after alkaline steaming, particularly caustic steaming, in the new continuous scouring and bleaching processes.

For best results, consult our Technical Staff in regard to adapting this new Mathieson development to your particular operations. Write for further information.

Mathieson

CHEMICALS

* Developed in collaboration with Pepperell Manufacturing Company



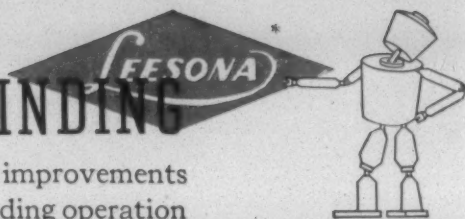
THE MATHIESON ALKALI WORKS (INC.) 60 EAST 42nd STREET, NEW YORK 17, N. Y.

CAUSTIC SODA . . . SODA ASH . . . BICARBONATE OF SODA . . . LIQUID CHLORINE . . . BLEACHING POWDER . . .
AMMONIA, ANHYDROUS & AQUA . . . HTH PRODUCTS . . . FUSED ALKALI PRODUCTS . . . SYNTHETIC SALT
CAKE . . . DRY ICE . . . CARBONIC GAS . . . SODIUM CHLORITE PRODUCTS . . . SODIUM METHYLATE

THIS IS NO. 47 OF A SERIES ON

GETTING THE MOST FROM WINDING

Information about winding designed to show improvements
in winding equipment and new ideas in the winding operation



ADJUSTMENT OF TRAVERSE FRAME STOPS (No. 50 Winding Machine)

A micrometer adjustment may be obtained in setting both the Upper and Lower Traverse Frame Stops (A and B respectively in Fig. 1).

This feature is particularly important in the case of the Upper Traverse Frame Stop, for it makes it easy to establish a positive relationship between the Traverse Frame and the cone at the start of winding.

When the Stop is properly adjusted and the Traverse Frame correctly positioned at the start of a new cone, the first layers of yarn will be wound onto the cones securely, with no possibility of disturbance from the thread guide. This is especially desirable for fine yarns.

The Lower Stop may also be adjusted to a very fine setting, so that when the machine is once stopped, the Traverse Frame cannot be pushed beyond a predetermined stopping position.

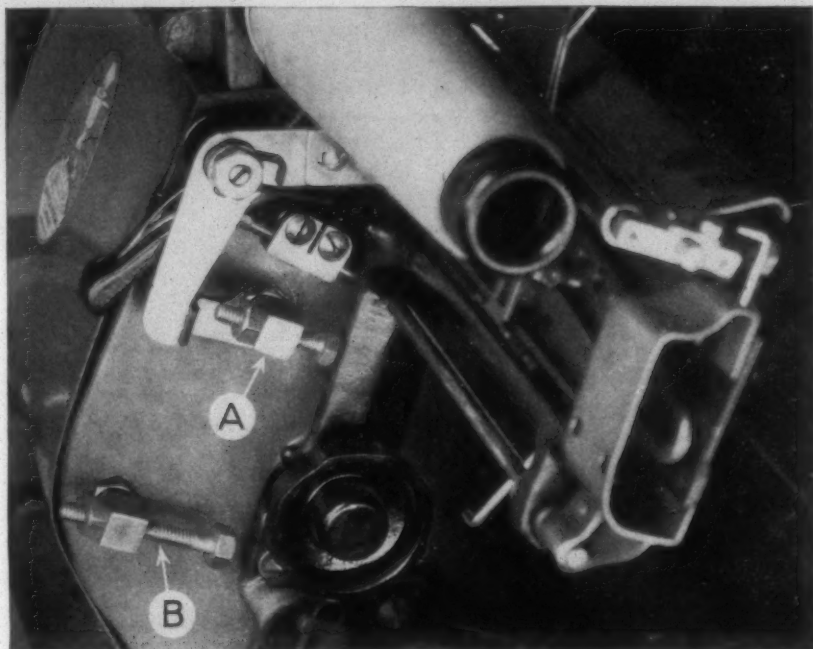


Fig. 1 Upper Traverse Frame Stop (A); Lower Traverse Frame Stop (B).

Both Stops can be securely locked to the frame by nuts which will not work loose.

SENSITIVE SIZING GAUGE (No. 50 Winding Machine)

By use of the Sensitive Sizing Gauge 50-105AX (Fig. 2), a cone of any diameter can be accurately wound to size and the machine automatically stopped.

This gauge consists of a lever (50-1209, A in Fig. 2) through one end of which a screw (50-1210, B in Fig. 2) is threaded. The lever is fulcrumed on a pin (C) attached to the regular stop 50-105CA, which is in turn attached to the Dog Segment at the point where it is roughly decided to stop the machine.

Adjustment of the Screw (B) which bottoms on the top of the segment will raise or lower the Lever (A) to any exact desired position. When the Traverse Frame Back comes in contact with the Lever, it knocks off the Segment, trips the Dog and automatically stops the machine.

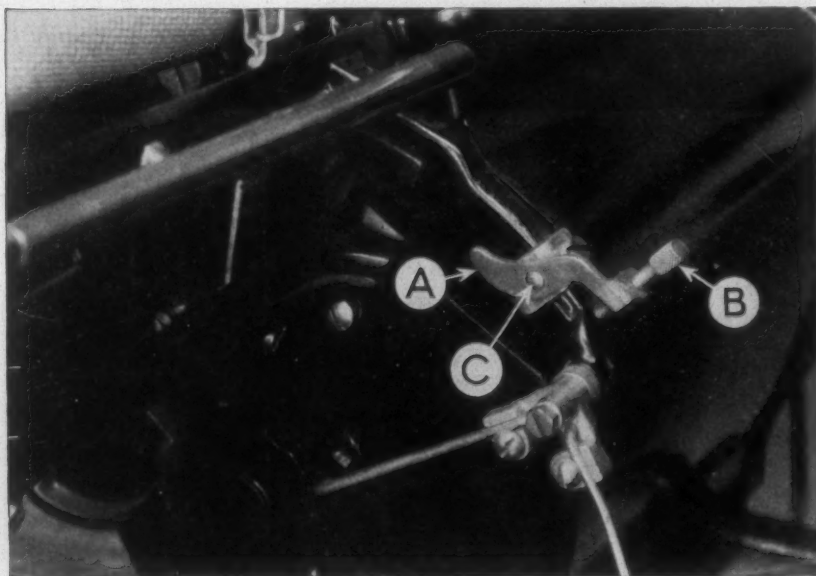


Fig. 2 Sensitive Sizing Gauge

See our Catalog in *TEXTILE YEARBOOK*

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UNIVERSAL WINDING COMPANY

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THE SUPERIOR WATER REPELLENT

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SERVING THE *Petroleum Needs of the Nation*



Typical Sinclair Refinery, Transportation and Distribution Units.

- SINCLAIR produces oil from more than 8000 wells located in the United States and Venezuela.
- MANUFACTURES all types of petroleum products in 10 modern refineries processing 90,000,000 barrels of crude oil annually.
- TRANSPORTS 300,000 barrels of crude oil and finished products daily through 14,000 miles of pipe lines; also employs thousands of tank cars and a large fleet of ocean tank ships.

- OPERATES a chain of waterfront terminals from the Gulf of Mexico to New England.
- DISTRIBUTES petroleum products through 2000 wholesale bulk plants which also service a network of many thousands of Sinclair Dealer stations.
- PRODUCES basic material for manufacture of synthetic rubber in one of the largest butadiene plants in the United States.

Sinclair is America's outstanding manufacturer of lubricants.

SINCLAIR TEXTILE LUBRICANTS

FOR FULL INFORMATION OR LUBRICATION COUNSEL WRITE SINCLAIR REFINING COMPANY, 630 FIFTH AVENUE, NEW YORK 20, N. Y.



M. Weldon Rogers Is Elected New President of Southern Textile Association

SOME 200 persons came to Charlotte Oct. 7 for the 36th annual convention of the Southern Textile Association which was confined, as has been the wartime custom, to one day of activity.

M. Weldon Rogers of Jackson Mills at Wellford and Iva, S. C., and High Shoals, N. C., was named president of the organization to succeed Joe C. Cobb of Startex Mills at Tucapau, S. C. B. M. Bowen of Salisbury (N. C.) Cotton Mills was elevated from chairman of the S. T. A. board of governors to vice-president, succeeding Mr. Rogers. F. D. Lockman, Jr., of the Brandon Corp. at Woodruff, S. C., was named chairman of the board of governors, and was thus placed in line for the association presidency in 1947.

The nominating committee consisted of Smith Crow, chairman, of Erlanger Mills at Lexington, N. C.; T. W. Mullen of Rosemary Mfg. Co., Roanoke Rapids, N. C.; and T. C. Pegram of Erwin Cotton Mills Co. at Cooleemee, N. C., president of the association during 1942-43. Marshall Dilling of Gastonia, N. C., was re-elected executive secretary, and four members were added to the board of governors. Virgil E. McDowell of Rosemary Mfg. Co., whose term had expired, was re-elected for a three-year period ending in 1947, along with three new members: S. M. Cauble of Acme Spinning Co. at Belmont, N. C.; John Caughman of Spartan Mills at Spartanburg, S. C.; and A. R. Marley of Erwin Cotton Mills Co. at Durham, N. C. A. D. Elliott of Pacific Mills at Columbia, S. C., was named to replace Mr. Lockman on the board of governors for a one-year term ending next year.

Other members of the present board of governors are: W. E. Hammond of Balfour, N. C.; J. A. Lyons, Jr., of Anderson, S. C.; J. Z. Lancaster of Pacolet, S. C. (terms end in 1945); Mr. Crow, W. W. Splawn of Pelzer, S. C., and Howard Barton of Spray, N. C. (terms end in 1946). Chairmen of the various S. T. A. divisions as well as former association presidents are ex-officio members of the board.

The morning session of this streamlined convention was opened at 10 a. m. by President Cobb, who thereupon made the retiring president's address. (Mr. Cobb's remarks are printed on the next page of this issue.)

"Textile Education in the Future" was the subject of the next speaker, Dr. R. F. Poole, president of Clemson (S. C.) College. Dr. Poole stated that "Cotton has new and successful competitors in synthetic and natural products which

may seriously disrupt the welfare of the Carolinas, where the growing and manufacture of cotton are of real importance." He stated that "those interested in the uses of cotton must face the situation in a realistic manner. There are many potential new uses for cotton. The quality of cotton and its products may be greatly improved. The compounding of cotton with silk (nylon, wool, rayon, linen and other natural and synthetic products by the cotton manufacturers is worthy of serious consideration. Full research into these potentialities should be undertaken by the cotton textile interests, the plant breeders, the chemists and the physicists. The colleges can produce the researchers and teachers to meet the fullest needs of the industry, and with the continued support of manufacturers good results should be achieved toward maintaining stability of the industry. The textile graduate of the future must be a better educated product than the textile schools have heretofore given to the industry. His knowledge must be well developed in botany, chemistry, commerce and physics, and most important, his interest must be toward applying these values into useful and practical concepts of the industry. A fuller education of the farmer and the mill worker as to the needs of the industry must be accomplished to the end that quality shall be maintained everywhere from field to consumer."

Post-War Machinery

Elliot B. Grover, head of the yarn manufacturing department at the school of textiles, North Carolina State College, followed Dr. Poole with remarks relative to "Post-War Textile Machinery." He dealt with this subject by discussing in general the post-war period, what the war has meant to textile machine builders, what features are wanted in new machinery and why, and what features may be expected to be found in post-war textile machinery to satisfy these wants. (Mr. Grover's remarks will be carried in an early issue of TEXTILE BULLETIN.)

Final speaker of the first session was Dr. Harold DeWitt Smith of A. M. Tenney Associates, New York, who discussed the "personalities" of textile fibers. By means of slides he presented a system of evaluating the mechanical properties of a textile fiber so as to reveal its particular character. As the speaker pointed out, when the various natural and synthetic fibers are studied in this way it can be seen that each has its own—(Continued on Page 59)

The Retiring President Looks at the S.T.A. Past and Future

By JOE C. COBB

IN the beginning I want to thank the divisional chairmen for the splendid job that they have done this year with our sectional meetings. They are the men that have carried the ball and are responsible for the success of our association. They have planned good meetings and have had wonderful attendance. Let me give you some attendance figures for a few of our meetings:

Eastern Carolina Division, Raleigh	60
South Carolina Weavers, Spartanburg	100
Gaston County Division, Gastonia	60
Piedmont Division, Charlotte	55
South Carolina Carders and Spinners, Spartanburg	225

I would also like to thank our associate members for their usual co-operation in helping us with our meetings. They always plan something to make our annual meeting more interesting. Don't ever sell these fellows short, they are our friends.

Last year you elected me your president and ever since that day I have been trying to think of some way to place our association in its proper position in the textile industry. I have never thought that the mill presidents and treasurers have realized the value of our association, nor have they given us the backing we deserve. Since we have never asked them for any recognition or assistance I am taking it for granted that they have thought we did not want them to

help us. I am sure they realize the value of a well-run association because they have an association of their own which is financed by contributions from the mills represented. Their association is not dependent financially on dues collected from each individual personally or from advertising; therefore, they can have a full-time paid secretary and treasurer. That is the key to a successful association.

I would like to point out that the Southern Textile Association is made up of mill superintendents and overseers. These men are responsible for the most important factors in the operation of a mill, namely, production, cost, seconds, waste, personnel, mill and machinery maintenance, supplies and numerous other duties. Therefore, I maintain the mill presidents and treasurers are missing a good opportunity by not backing an association that will help these men improve their knowledge of the above-named duties or factors for which they are responsible. I insist they would never regret giving our association the financial assistance it deserves. At the same time they should encourage their superintendents and overseers to attend the sectional meetings and allow them to take part in the discussions. If this idea is of interest to the presidents and treasurers I am sure the board of governors of our association would be glad to discuss details with any designated officers of their association at their convenience.

Some Changes Suggested

I would like to offer for the association's approval the following changes in our present way of operating sectional meetings: schedule the meeting for one of the three week days, either Tuesday, Wednesday or Thursday. Start the meeting promptly at 10 o'clock in the morning. Have one hour for lunch from 12 to 1 o'clock. Resume the meeting at 1 o'clock and continue until 3 o'clock in the afternoon. My reason for suggesting these changes—first, Saturday is usually the only day overseers and superintendents have a little time for themselves; therefore, we only run our meetings now for two hours on Saturday morning. Two hours does not give us enough time to have a well-rounded meeting. Speakers have to rush through their subjects and there is not enough time left for discussion; second, if our meetings are worthwhile, and they evidently are since we have been having such good attendance, then we should devote more time to each meeting. The mill presidents and treasurers usually hold their meetings during week days.

So much for those things that I believe will make for improvement of the association. Now, I would like to call attention to the job that has been done so far and at the same time call attention to the—(Continued on Page 60)

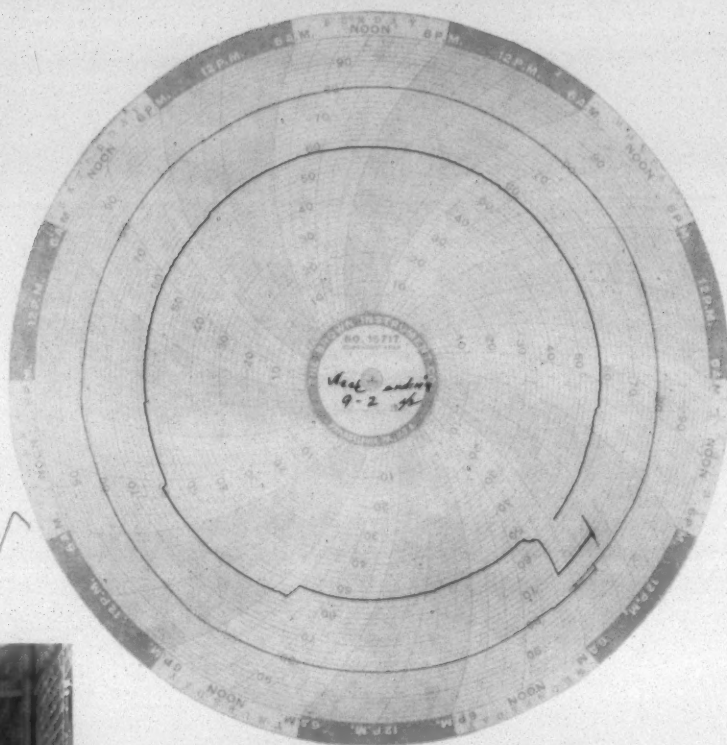


New and old officers of the Southern Textile Association pictured at the organization's recent annual meeting: seated, left to right, B. M. Bowen, vice-president and past chairman of the board of governors; M. Weldon Rogers, advanced from vice-president to president; and Marshall Dilling, executive secretary. Standing, left to right: Joe C. Cobb, retiring president; John C. Turner, the re-elected associate members division chairman; F. D. Lockman, Jr., the new board chairman; and James T. McAden, secretary-treasurer.

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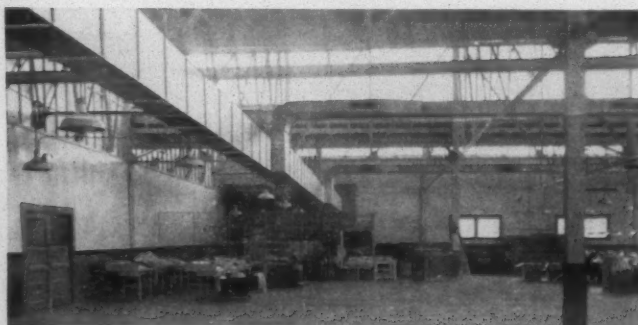
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South Carolina Operating Executives Discuss Carding and Spinning

ONE of the most successful meetings conducted by the Southern Textile Association this fall was that on carding and spinning at Spartanburg Sept. 16, under sponsorship of the South Carolina division. John M. Caughman, superintendent of Spartan Mills at Spartanburg, was in charge during the meeting, and before its conclusion was elected chairman of the carders and spinners group of the division.

On the program were Robert M. Jones, chief engineer of Saco-Lowell Shops, and R. J. McConnell, vice-president of Whitin Machine Works, who spoke on "Probable Trends in Carding and Spinning." Abstracts of the papers they delivered were printed in the Oct. 1 issue of *TEXTILE BULLETIN*. Other features at this meeting were the discussion of six questions relative to carding and spinning, and "Processing Rayon on the Cotton System," a paper by E. H. Dreher, assistant manager of the cotton division, American Viscose Corp. textile research department, Marcus Hook, Pa. In this issue an abstract of the discussion on carding and spinning questions is presented, and following it Mr. Dreher's paper.

CHAIRMAN CAUGHMAN: Mr. Jones, you brought out the fact that on the blending reserve picker there now is a device by which, instead of bringing the back part of the picker to a stop, the entire picker continues to run, but at slower speed on the back part. Is that right?

MR. JONES: Yes, that is right.

CHAIRMAN CAUGHMAN: What effect has that had in decreasing the wear on those beveled gears?

MR. JONES: Well, I do not know, sir, what effect that has had. I do not know that I can answer that question exactly. It does, of course, prevent and shock to the gear; it keeps things moving.

CHAIRMAN CAUGHMAN: Has that brought about a more even lap, yard for yard?

MR. JONES: It does bring about more evenness, yard for yard. Also, wherever the machine stops there is a string formation made on the lap. It eliminates that entirely.

CHAIRMAN CAUGHMAN: Does the supersensitive belt shifter have any place?

MR. JONES: Oh, yes, that is still necessary in order to keep the evener working properly.

CHAIRMAN CAUGHMAN: Are there any other questions?

MR. A.: I should like to ask Mr. Jones, or Mr. McConnell, or both, what we may expect from the new machinery? Are we going to get any higher front roll speed, in order to keep labor costs down, or are we going to larger packages?

MR. JONES: My feeling is that we are going to larger packages and are not going up on speed. I cannot speak for Mr. McConnell. Unless, of course, as Mr. McConnell said, we find some new materials, we are still restricted as to speed by the traveler.

MR. A.: What are we going to do? Can we find some way to make the roving turn? In other words, if we get too big a package in length, naturally we are going to have some stretch. Has anything been done along that line?

MR. JONES: I do not think that is a very serious factor. You are thinking about the skewer problem in the creel?

MR. A.: Yes. In other words, are we going to an 8x4 package, or larger?

MR. JONES: 10x5, probably. There are other methods to hold the bobbin secure than the skewer. The common English practice is to use a great deal less twist than we do. I think if American mills keep after maintenance as they should we shall have no serious trouble on that point.

MR. A.: One other question. One of you said we get more neps by speeding up. Is that on rayon or on cotton?

MR. McCONNELL: Rayon.

MR. JONES: It is true also, more or less, on cotton of very long staple—usually Pima or Sea Island.

CHAIRMAN CAUGHMAN: Are there any other questions?

GEORGE R. KAY, superintendent, Olympia Plant, Pacific Mills, Columbia, S. C.: I should like to ask why the machine shops in this country have not followed the English practice, when going to larger roving packages, of using the perforated roving rod. I wonder why the machine shops have not adopted that practice for larger packages.

MR. B.: For fine hank rovings they use revolving perforated rollers instead of roving rods. That helps to eliminate the stretch.

MR. JONES: I have seen drawings of that but have never seen one of the actual rollers themselves. It might be we could use it. Many attempts have been made to make a positive-driven creel. Everything we have ever tried mechanically has had to have more tension and proved unsatisfactory. Instead of getting improvement we get more tension.

MR. McCONNELL: I agree with Mr. Jones. The only thing on which I do not agree with him is that we are going to these larger packages altogether. One thing we have to consider is the power factor. When the power factor gets to a certain point it does not pay to go any higher in your ring size. For instance, with a 2½-inch ring, in going from 5,000 to 7,500 you get a 50 per cent increase in speed but you get a 100 per cent increase in your power. If your



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power is comparable to your spinning cost (and in one of the mills I worked in it was almost even) it does not pay to go beyond a certain size of ring, because the power cost will increase. If you are going to build a new mill you have to take those factors into consideration, too. Mr. Sheldon of F. P. Sheldon & Sons, engineers, of Providence, have just gotten out a treatise on that question which is very interesting. While I do not quite agree with his conclusions, he proves that on 20's with a 1 7/8-inch ring 9,000 spindle speed is the most economical point at which to spin, and more economical by far over a wider ring. As I say, I do not know whether his figures are right or not, but he is a very able man and has gone into it pretty thoroughly. So we have to consider those things.

CHAIRMAN CAUGHMAN: If there are no more questions you wish to put to these gentlemen, we will go on to those that were sent in for discussion. One of the first questions was this: "Do you use the system of spinner and clean-up hands? If so, how do you go about arriving at the division of work?" I believe that question was originally sent in with some idea of a discussion on work loads, was it not? But our by-laws or rules are such that we are not to discuss work loads or rates of pay. That is right, is it not? So keep that in mind, gentlemen, on this particular question, because it is one that could very easily lead to a discussion of work loads. Is there anyone here that uses clean-up hands in the spinning room?

P. F. BARNES, overseer spinning, Pacific Mills, Lyman, S. C.: We use spinners and clean-up hands.

CHAIRMAN CAUGHMAN: How do you go about the divi-

sion of work between the spinner and the clean-up hands? In other words, how much cleaning do you leave to the clean-up hands, and how much does the spinner do?

MR. BARNES: No cleaning. The spinner only spins and puts up ends.

CHAIRMAN CAUGHMAN: In other words, all the cleaning is left to the clean-up hands?

MR. BARNES: That is right.

CHAIRMAN CAUGHMAN: Does anyone use a different system? Does anyone use a system under which the spinner continues to do some cleaning; that is, the clean-up hands do the roll cleaning but the spinner does the wiping?

MR. BARNES: We have clean-up hands on all three shifts.

CHAIRMAN CAUGHMAN: The second question is: "At what speed do you operate your doffer comb, and on what basis do you arrive at this speed? With a lowering of speed, what temperature drop do you get, if any?" Could get any statement as to that? Let's get some points here on different speeds. Would some of you mind stating your speeds?

W. M. ALLISON, plant superintendent, Startex Mills, Tucapau, S. C.: We operate ours between 1,400 and 1,600. I do not know that we have made a test to determine how fast or slow to operate it, but that is what we are doing.

CHAIRMAN CAUGHMAN: How do you arrive at that speed?

MR. ALLISON: That is the pulley that is on the card.

CHAIRMAN CAUGHMAN: I know the pulley does that, but how do you arrive at the diameter of the pulley you place on there?

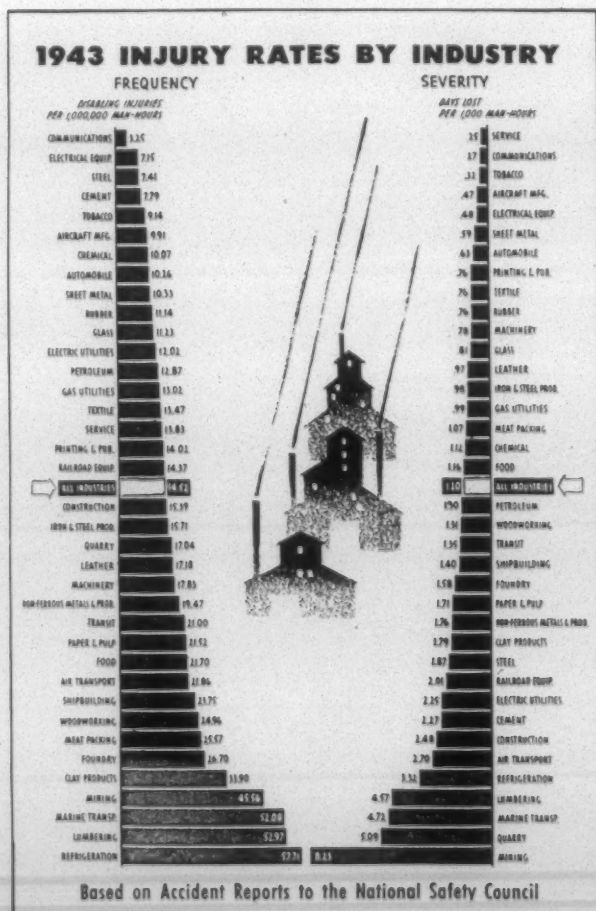
MR. ALLISON: As I said just now, we did not make any test to arrive at any speed. I just merely stated our speed. By the way, I can tell you the temperature of the oil in our comb box. It runs from 116 to 118° F.

CHAIRMAN CAUGHMAN: Is there any difference in speeds on that?

W. E. HAMMOND, superintendent, Balfour (N. C.) Mills: I should think the speed of the doffer has a great deal to do with the speed of your comb. You might run your doffer 7.5, or you might run it at 10 or 12. Of course, that would govern the speed. On three different cards I have an average speed of 1,670, but had a cylinder speed of 72, which is the speed Saco-Lowell recommends. That would account for my speed being higher than the speed the gentleman just stated. With slower doffer speed, if you can cut that speed considerably, I think it will help you keep your comb box from heating up.

CHAIRMAN CAUGHMAN: Thank you, Mr. Hammond. I think we are getting at the point. I think the point of this question is arriving at some ratio of the doffer speed to the comb box speed. As Mr. Hammond pointed out, there is some relation. Now, has anyone arrived at a ratio, or is it a rule of thumb, or trial and error?

W. E. ELLENBURG, overseer carding, Beaumont Mfg. Co., Spartanburg: The only rule on that, I believe, is the ratio of 125 pounds to the doffer. However, my practice has always been to cut that down. Our comb box is making about 1,250, and we are carding about 16 pounds. We



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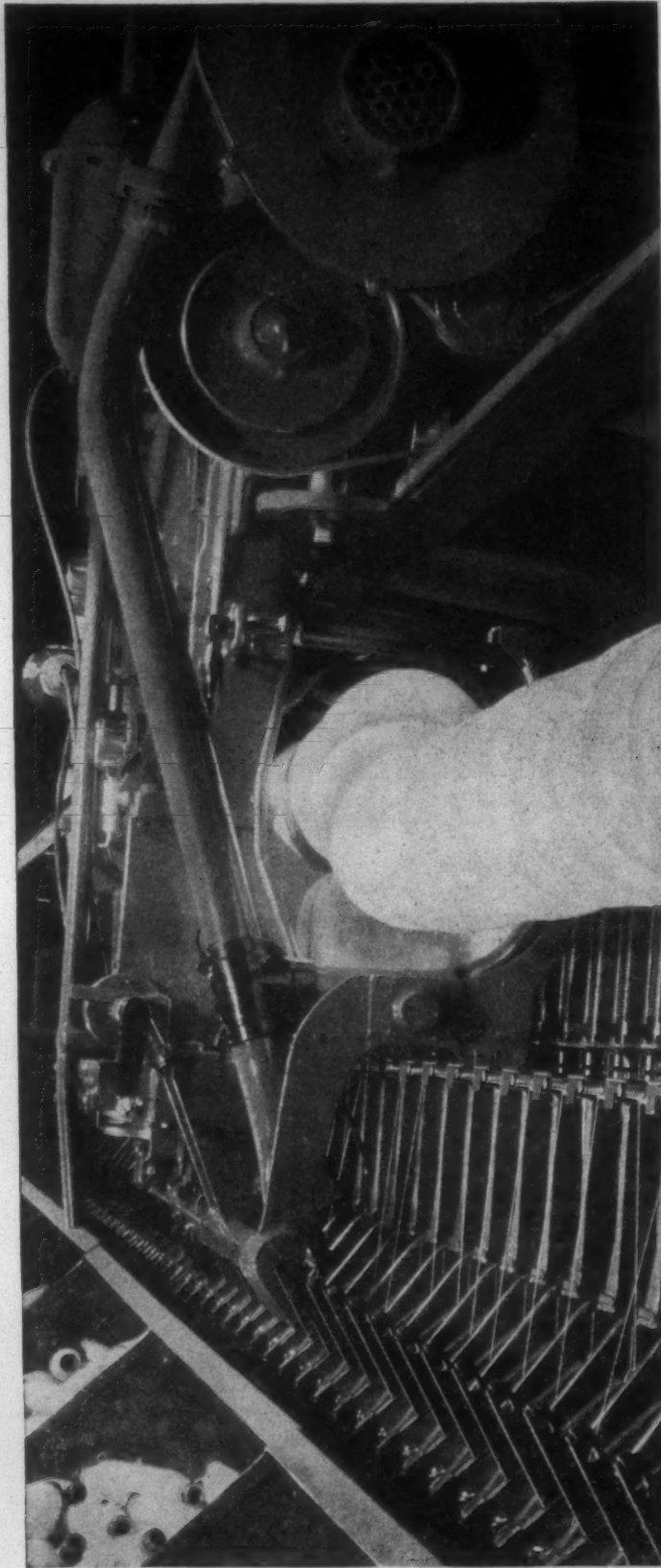
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arrived at that by cutting it down as low as we can. We find that saves the comb box.

CHAIRMAN CAUGHMAN: I see Mr. Jones nodding very affirmatively here that 125 times the comb box is the ratio. Mr. McConnell is shaking his head "No." Why, Mr. McConnell?

MR. MCCONNELL: I do not believe you could take off the doffer with the comb oscillating only 700 times. We usually send them out standard at 1,500.

CHAIRMAN CAUGHMAN: Do you have any relation between that and the speed of the doffer?

MR. MCCONNELL: Not unless the mill asks for it. That is our standard.

MR. JONES: The Saco-Lowell standard for years has been to put out one size of comb box, unless the mill asks for something different. That is $4\frac{3}{4}$ -inch. That gives you a speed of something like 450 r.p.m. There was an old English rule of 125—as the gentleman from Beaumont said, 125 times the doffer speed. That is an old English rule. As Mr. McConnell said, we would not attempt to run 700 r.p.m. Like all rules, it has to be used with reason. Recently some thought has been given to this question. It would help the comb box temperatures were it reduced. I think the machine manufacturers put it up to 1,450 because they knew we possibly could go up to 1,200 and even 1,400 r.p.m. and still get the web off. But with some rayon mixtures we could reduce the doffer speed too much.

CHAIRMAN CAUGHMAN: Has anyone done any experimenting with an idea of lowering, and did you get a temperature drop?

RICHARD K. REES, overseer carding, Spartan Mills: In working with this reduction of comb speeds we have tried several different speeds. First we took the easiest reduction, which was to drive straight from our comb box pulley, which gave us, instead of the original speed of 1,750 revolutions, a reduction to 851. At that speed we took the temperature of the oil over a month's period; and I might say we did not add any oil, during that month's period, to the comb box and we maintained our level pretty well during that month. We got a reduction in temperature there of around 20°. After some experimenting we decided that a little higher speed would probably be more efficient. That was a little bit below the standard of 125. We went to 1,015 revolutions, which seemed to work out very nicely, and we are working along that line now.

CHAIRMAN CAUGHMAN: You got about a 20° drop in temperature; and with the decrease in temperature I believe you also got, with the lowered speed, less frequency in oiling the box. Is that right?

MR. REES: That is right.

CHAIRMAN CAUGHMAN: How often did you oil the box before?

MR. REES: We oiled twice a week before and after that once a month.

CHAIRMAN CAUGHMAN: In dropping from 1,700 to 1,000 you got a decrease in temperature of 20° and in frequency of oiling you went from twice a week to once a month?

MR. REE: About 1,000. That was in the line of experiment. I don't know how it would work out.

CHAIRMAN CAUGHMAN: Or has anyone else done any experimenting on speed?

G. E. SESSIONS, superintendent, Ware Shoals (S. C.) Mfg. Co.: We have done a little of that lately and have changed a few of our cards. They were operating at a little over 1,400, and we changed them to about 1,100 or a little over. We arrived at that just by hit or miss; we do not have any particular rule. We have not taken any temperatures, but our comb boxes are operating better at that speed.

F. D. LOCKMAN, superintendent, Clinton and Lydia Mills, Clinton, S. C.: I should like to know if the speed of the doffer comb has any effect on the quality of the sliver.

CHAIRMAN CAUGHMAN: In cleanliness or evenness?

MR. LOCKMAN: Both.

CHAIRMAN CAUGHMAN: Mr. Rees, what did you find in your experiments, and Mr. Sessions? Will you comment on that point, Mr. Sessions?

MR. SESSIONS: We did not notice any change in the quality of our sliver. We had to lower the doffer a little bit to take care of the tension on the web, but we did not notice any change in quality.

CHAIRMAN CAUGHMAN: Mr. Rees, did you get any difference in the quality of the web there?

MR. REES: No, we tried that and ran tests on it; and the quality I think was the same, with no appreciable change at all.

CHAIRMAN CAUGHMAN: Did you carry the tests on through?

MR. REES: Yes, we did, but the simple fact that that was carried straight through probably made it a better quality. It went straight through, without the usual sitting on top of the creels, and therefore we did get a little higher break. I think that would be attributed, probably, to the retaining of moisture, etc., without drying out.

MR. JONES: If you get the doffer comb down too low there begins to show a slight variation in the uniformity of the sliver. You see that is under tension, and it is due to the intermittent action. The nearer you can get to continuous action the better it will be. But within the range of which these gentlemen are speaking I do not think there would be any difference.

MR. DREHER: We find with rayon denier the speeds have to be up to standard, and on $2\frac{1}{2}$ -inch and three-inch lengths they have to be still higher. We run up to 1,720 on $2\frac{1}{2}$ -inch to three-inch lengths. The speed of the doffer is about 16.

MR. JONES: You have a very high doffer speed?

MR. DREHER: Yes.

CHAIRMAN CAUGHMAN: That is still following pretty close to the rule.

NEWTON G. HARDIE, general superintendent, Gossett Mills, Anderson, S. C.: I was wondering whether, if you run a 65-grain card sliver and produce the same per hour from the card, the same doffer comb speed would be appli-

cable if you were running a 50-grain card sliver and the doffer running faster. That is the same production per hour of the card. I wonder if the two conditions would produce the same comb speed.

CHAIRMAN CAUGHMAN: Mr. Jones and Mr. McConnell have pointed out the r.p.m. of the doffer. Mr. Hardie is introducing the question whether it might be pounds per hour instead of r.p.m. Is that it?

MR. HARDIE: I was wondering if running lighter or heavier would affect it

MR. MCCONNELL: I do not think it would make any difference. I think probably you could make a slight adjustment, but I do not think it would make much difference. What I should like to find out is why you folks are so interested in this subject—because of wear or because of the amount of oil?

MR. HARDIE: Both, I think.

MR. MCCONNELL: Well, the temperature would not have anything to do with the wear, because that temperature is safe under normal working conditions.

CHAIRMAN CAUGHMAN: In other words, decreased temperature does not mean decreased wear?

MR. MCCONNELL: Not at that temperature. 160, you say, is the highest.

CHAIRMAN CAUGHMAN: Now, the third question is:



Miss Marion Foard of Columbia, S. C., adds Southern glamour to the United States Rubber Co. textile exhibit at the Biltmore Hotel, New York. Miss Foard formerly worked in the company's mill at Winnsboro, S. C., and recently transferred to the main offices in New York. Officials of U. S. Rubber in attendance at the exhibit pointed out that cotton will continue in the forefront of fibers used in the manufacture of rubber goods. Visitors saw cotton processed on mill machinery especially set up for the show. Besides its plants at Winnsboro the company operates mills at Hogansville, Ga., Shelbyville, Tenn., and Scottsville, Va.

"What has been your experience with perforated screens on cards?" Can we get a show of hands as to the number of people who have experimented with that? I see three hands raised. Would you gentlemen care to give us your experience with that? Mr. Kay?

MR. KAY: We equipped three cards with perforated screens and ran waste tests on those three cards, as compared with our regular screens. The cards were cleaned thoroughly first. We found we got the same amount of strips on the perforated screens and less toppings and less fly back in front. We thought maybe they had picked out three of the best cards, so we swapped cards and got the same results. We noticed our web was a darker shade. What the cause was I do not know.

WALTER REGNERY, assistant secretary, Joanna Textile Mills Co., Goldville, S. C.: We have experimented a lot with the perforated screen and find quite a difference in fly waste, with similar yarn strength, one against the other, and everything else. So far as the clearer waste is concerned, the clearer waste was lower on the drawing and roving.

S. A. BLACK, superintendent, Granby Plant, Pacific Mills, Columbia, S. C.: I should like to ask what settings are used on the perforated screen, compared with the regular.

MR. REGNERY: We used the same settings as on the old type. We find we get a more uniform amount of fly with perforated screens than we did with the old type. In other words, with the old type it is more difficult to get a uniform amount of fly waste out.

MR. KAY: Do you get less strips with the perforated screen?

CHAIRMAN CAUGHMAN: Shall we put it this way—do you get any change in strips, using the perforated screen?

MR. REGNERY: I think our strips stayed the same.

MR. KAY: Card men have been afraid of perforated screens; they were afraid of damaged clothing. But we do find with a perforated screen, when we have a screen under there, if we keep our belts right we have no trouble.

CHAIRMAN CAUGHMAN: "How do you determine proper snick-plate settings for various numbers?" I believe Mr. Spencer of Barber-Colman is in the audience, and it certainly seems he would have a world of information. Mr. Spencer?

JOHN H. SPENCER, Barber-Colman Co., Greenville, S. C.: The way to determine the snick plate setting on different counts of yarn is to set it close, until you get chafing, then set it back until it does not chafe, and you have the proper setting. I might say that with the snick plates we have today you can set your wrench to that setting, and with that wrench you set all your snick plates exactly alike.

MR. REGNERY: To take twist out of yarn—for example, if you have all your settings arrived at and then take out twist—what are your snick plate settings?

MR. SPENCER: The same rule I stated. The chances are that you have too much twist.

CHAIRMAN CAUGHMAN: We will pass on to the fifth question: "Has anyone tried exhausting the air from pickers into a mote box under each beater, then doing away with the dust house or filters? If so, what effect did you



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have on lap, cards and spinning?" Does everybody here run either a dust house or filters?

MR. ALLISON: I am rather afraid to say anything with Saco-Lowell's chief engineer and all these other machinery men here, because I would be sticking my neck out. I am no engineer so far as machinery is concerned. Mr. Frank Lockman was the one that showed me this about two years ago—I put a sheet-metal box about three inches deep into the mote box, cut a band housing and stuck it, with a neck on it, into the band housing, reduced the speed of the fan and reversed the direction, exhausting the air right back into the mote box instead of into the dust house. We were all very skeptical about it, because the whole principle seemed wrong. We are still not too sure about it, but we made what for us were very exhaustive tests. We ran our laps, before and after we made the change, on the lap meter; and we ran our sliver from the cards, breaker drawing, and finisher drawing on the sliver tester; and we could not see any change from this box. We could not see that there were any disadvantages to it. We still have an even sliver. We have made various tests and still do not find that it has hurt us in any way. We do not get any whirling motion in the mote box; there is no appreciable increase in the motes. We were able to humidify our picker room; and I think we are getting just as good results with that system if not better results than we got when we exhausted it into the dust house. Of course, we are running middling $1\frac{1}{16}$ -inch cotton. I think that has a lot to do with it—the cleanliness of the cotton has a lot to do with it, and also conditions in your opening room. We have two No. 11 dust collectors in tandem on No. 11 lattice cleaners, and they helped us there. We feel it has been very successful with us.

CHAIRMAN CAUGHMAN: I am sure it takes courage to stand up here and make the statement Mr. Allison has made, in view of all the years this has been done. I cannot help but tell you of an experience I had regarding this same thing. I was visiting a mill, and along with the superintendent of the mill and the boss carder I went down into the picker room. It was a mill quite a distance from here. The superintendent asked me: "Have you had any experience with filters to do away with the dust house?" I said I had. The carder, a dignified old gentleman—a very good carder he must have been, from his carding—said: "Listen,

young man; don't tell me you can do away with the dust house. It cannot be done." He was a very good carder, but later it developed that he had not visited another mill in 40 years.

MR. D.: Before you ask Mr. Jones for his opinion on that I should like to tell about an experience I had in Fulton Cotton Mills in Alabama, where they put the machines up on "T" beams.

CHAIRMAN CAUGHMAN: Mr. Jones?

MR. JONES: I might say that similar ideas have been tried. One of our first attempts at recirculating inside the picker was to do something along that line. In some cases it has worked. The only question is, isn't there a lot of small dust in the room where you have a whole room full?

MR. D.: No. No dust at all.

MR. JONES: No dust. Well, you have to get everything tightened up pretty well in order to do it. That is one of the things we ran into—that there was a lot of dust. It is all right on one picker, but where you have six you usually get a room full of dust.

MR. ALLISON: We did not have the dust.

CHAIRMAN CAUGHMAN: We will go on to the next question, which is the last one on the list: "Is it preferable to run the ring rail up fast or down fast on combination wind to prevent sluffing at the spoolers?" Shall we divide the room and put those of one school of thought on this side and those of the opposite opinion on the other?

C. B. LITTLE, superintendent, Whitney (S. C.) Mills, Inc.: We ran quite a few tests on that and have found very little difference in the day we ran it.

CHAIRMAN CAUGHMAN: Which way are you running now?

MR. LITTLE: Up fast and down slow.

CHAIRMAN CAUGHMAN: Gentlemen, that winds up the formal questions, and we are a bit over the noon hour. I do want to thank you for your assistance in sending in these questions, and want to urge you to give your chairman, whoever he is, the benefit of that help. He does not have any way of knowing what your difficulties are, and when he writes to you asking for questions please send them to him. That is the only way he can make up this part of the program.

Processing Rayon on the Cotton System

By E. H. DREHER

THE carding and spinning of rayon staple on the cotton system has been covered on a number of occasions. However, I hope to elaborate on a few points that may be of some interest. The term "rayon staple" designates man-made fibers of pre-determined deniers and lengths. Denier represents the number of grams in 9,000 meter of filaments. For example, a one denier continuous filament would represent a cotton yarn count of 5,314. This figure readily gives one an idea how fine a one denier fiber actually is.

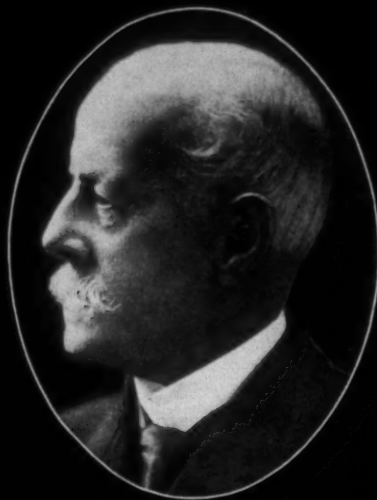
Rayon staple is produced by the viscose and acetate processes. Viscose staple is available in one, $1\frac{1}{4}$, $1\frac{1}{2}$, 3 and

$5\frac{1}{2}$ deniers and acetate in $1\frac{1}{2}$, 3 and $5\frac{1}{2}$ deniers. These mentioned types are specially designed for the cotton system. However, there are coarser types produced and used in combination with other fibers in order to produce rather harsh fabrics.

Deniers such as one and $1\frac{1}{4}$ are used for fine yarn counts where fabrics such as broadcloths, voiles and handkerchiefs are desired. However, the fine deniers are also used in coarse fabrics in order to add a soft fabric appeal. The one denier produces especially strong yarns averaging 15 per cent or more above the coarser deniers, depending, however, on the denier compared. The $1\frac{1}{2}$ denier is well known throughout the trade and the three denier has been used quite extensively in blends with wool, acetate and other

The Cotton Mill of the Future as Foreseen in

1896



Hon. William C. Lovering
Member of Congress and
Leader among Textile Men
in the 1890's and
Early 1900's.

About 16 months after the first Northrop Loom was installed at Burlington, Vt., the late Hon. William C. Lovering, then one of the eminent men of the textile industry, read a paper before the Arkwright Club of Boston in which he tried to vision the Cotton Mill of the Future.

In that address, published in the *Scientific American* of May 2, 1896, he predicted 20 Looms per weaver, which has been fulfilled 5 times over. It is interesting to compare that then fantastic prophecy with today's reality.

The Prophecy

"Let us look into a possible weave-room of the future running on plain two-harness work such as print cloth and sheeting, if you will. On a single floor, there are a thousand looms run by fifty weavers, whose only duty will be to mend broken warp threads and start the looms."

The Reality

A 600 Loom mill in the South running on Osnaburgs with 6 weavers, 6 fixers and 6 battery hands.

Scores of mills with 1000 looms on print cloth operated by 10 weavers.

The record so far—124 looms per weaver.

Today, Reality Often Transcends Prophecy.

DRAPER CORPORATION

fibers. These combinations find a very favorable place in men's wear. The 5½ denier has not been used to a great extent since its limit of spin is approximately 14's. However, it is used some in blends and in combination with finer deniers for certain fabrics.

It is quite important to give due consideration to staple length since no one length can be chosen as ideal without taking into account the denier involved. Three denier 2½-inch staple can and is being processed on the cotton system. However, it would be quite difficult to attempt to process a one denier or 1½ denier in this long length since one would find it very difficult to separate the fibers properly and this would result in a very neppy yarn and a poor quality fabric. However, it is true that up to a certain point an increase in length results in an increase in strength. It has been found that the optimum strength is reached around 1⅞ inches to 1⅞ inches for one denier and 1¼ denier types. For the 1½ denier the strength increases up to about 2¼ inches. For three denier and 5½ denier the maximum strength is reached from 2½ inches to three inches. Therefore, in selecting a certain length, consideration must always be given to the denier involved.

Rayon staple under moisture condition of 58 per cent R.H. and 78° F. has a regain of about 11 per cent and is sold with this consideration in mind. Rayon staple also contains a soft finish for the purpose of aiding processing qualities, and in plants where the stock is stocked dyed it is necessary to restore a lubricant in order to obtain normal processing qualities and avoid excessive fiber breakdown. It is quite important in order to maintain good processing conditions through the mill. Lack of control results in non-uniform processing and poor quality yarns and fabrics. It has been found that humidity conditions around 58 per cent R.H. and 78° F. give very satisfactory results. The amount of moisture in spun rayon yarn has a definite effect on the yarn strength and in order to obtain accurate test results from day to day it is quite necessary to maintain uniform laboratory conditions, since high humidity decreases the yarn strength. It has been found that rayon yarns bone dry will break from 30 to 35 per cent higher than yarns at normal conditions.

Severe Opening Not Necessary

The producers of rayon staple subject it to a mild opening and it is not necessary for the mills to use as severe opening as commonly used on cotton. It is quite helpful for mills to cross blend from as many bales as possible since some differences may be found in the moisture content from bale to bale. Mills using rayon staple 100 per cent usually pass the stock through bale breakers prior to picking and directly into the one-process picking. However, in the case where blends of various deniers and fibers are used, it is better to use other methods. The method now used to quite an extent in the trade is to blend proportionate weights of fibers through hopper feeders which feed onto a lattice apron through a bale breaker and by various means carried to a one-process picker. The one-process pickers are usually equipped with two or three beaters, and preferably Kirschner beaters are used throughout. There are some that go even further than this, particularly when complicated blends are necessary and double the laps on a finisher picker. However, in most cases where the laps are doubled on a finisher picker, a two beater single process picker is used

for the breaker laps. There are still those that adhere to the sandwich method of blending and use a very similar method as just mentioned. Another system that is used some in the trade is the Truslow blending set-up which should produce very satisfactory results. Blending is also done on the combers and draw frames. This method of blending is usually preferable when blending rayon staple and cotton so as to enable the handling of each fiber separately at the picking and carding. The combed blend is preferably used for fine yarn counts for very fine fabrics. In the handling of rayon staple several points should be given consideration at the pickers, namely, a reduction in speed of the hopper feeds, beaters and to make feed roll adjustments. Some mills have found it necessary to use paper sleeves and in other cases have tapered their lap pins so as to allow for its easy removal. Another change to be made at the picker should be to use less weight on the calender rolls so as to avoid the crushing of bunches of fibers that may not become completely disentangled at the baters. The weight used on the calender rolls depends somewhat on the denier or blend that is being used. Finer deniers require less weight, while coarser deniers would require more. It has been found that it is quite advantageous to throw more of the stock on the top screen so as to avoid lap splitting. Also the incorporation of split lap devices attached between feed roll and calender rolls aids in eliminating lap splitting. With the above mentioned changes very little difficulty should be had with lap splitting.

Carding Procedure

At the carding we find conditions somewhat similar to those on cotton. Licker-in speeds are decreased from 25 to 50 per cent under that used for cotton. This is particularly necessary in the processing of one and 1¼ deniers. The feed plate should be set off ranging from .012 to .064 depending entirely on the staple length and denier. For 2½-inch and three-inch lengths, the wider setting would be used and for 1⅞-inch and 1⅞-inch staple closer settings would be necessary. Some plants have been bothered with large lumps pulling in at the licker-in and it has been found quite helpful to increase the weight on the feed rolls by approximately 50 per cent. Another thing that aids this plucking-in condition is wide feed plate settings. Of course, consideration must be given to producing a lap as uniform as possible, since excessive lumpy laps tend to make it quite difficult to control uniform feeding at the card. It has been found that productions are controlled at the card according to the denier and staple length. In the case of the very fine deniers such as one and 1¼ and lengths of 1⅞ inches and 1⅞ inches production rates of approximately five to six pounds an hour produce very satisfactory results. In the case of three denier and coarser types productions are much higher except in the cases where 2½-inch and three-inch length staples are used. As far as the 1½ denier is concerned a normal production of ten pounds per hour has been satisfactory. In the carding of rayon staple it is quite necessary to take out a clean strip even though in most cases they are re-used. It is much better to do this than to let the tangled and unseparated fibers carry on into the work. In the case of the fine deniers as one and 1¼ particularly, if yarn counts of 50/1 or finer are to be produced the strips should be re-carded separately—(Continued on Page 46)



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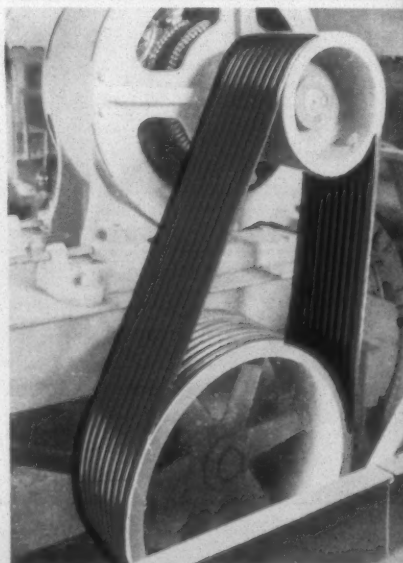
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PASSAIC, NEW JERSEY

Desizing Agents Useful in Processing Blends

By L. C. TRAYNER

MANY textile chemists and finishers are being called on to obtain greater value from the desizing agents used in rayon and cotton finishing plants. Enzymatic agents have been steadily improved and brought to standard strengths over the past ten years and the makers, in stabilizing their products to standard strengths, have obtained valuable data that is being used advantageously in practical textile desizing applications. Due to the increasing number of different yarn constructions being used in cottons and synthetic blended goods, the dyer, chemist and finisher must become familiar with the technical terms appearing in technical literature on the different enzymatic compounds being offered the textile finishing industry so that they can use these products more efficiently.

With this in view, the writer suggests some recent publications that would pay finishing plants to have in their laboratory for reference. These texts are of highly technical nature but should prove helpful to the plant chemist in familiarizing himself with the technical terms used in the chemistry of enzymes. "Chemistry and Methods of Enzymes" by Sumner and Somers, "Enzyme Chemistry" by Tauber, are some of the recent publications that will interest plant chemists who wish to keep abreast of the chemical progress on enzymes. A resume of some of the more common technical terms and their explanation in everyday technical meaning will give the reader the value of having a better understanding of some of these technical terminology.

The word "enzyme" signifies "in yeast" and was proposed by Kuhne in 1878. Enzymes being proteins are often described as biochemical catalysts, some of which are very susceptible to heat, pH of bath and other conditions necessary to prepare and use them in plant application work. An enzyme may be further described as a definite chemical compound found in animals, vegetable and micro-organic products, possessing the property of accelerating a chemical

reaction without being used up during the operation or ending up as a portion of the end-product formed.

Some of the widest used terms connected with enzymes are activation, inhibitors and antiseptics. The writer will attempt to define them in a layman's phraseology. Activators according to Tauber, are compounds which increase the activity of certain enzymes, such as hydrochloric acid, in its relation to pepsin, sodium chloride in relation to amylase, while other agents are yeast lactic acid, which is sometimes called assistant or "co-enzymes." The potency or activity of an enzyme is expressed in units of activity. A unit of activity is defined as the amount of a compound destroyed or changed from one chemical form to another under certain specified condition. An enzyme's activity or purity is expressed by its number of active units per gram of dry weight. Other authorities measure activity by the number of units per milligram of nitrogen. Other factors influencing activity of enzymes are temperature, pH of bath, concentration of enzyme, and impurities found in compounds to be worked on—destroyed or changed to new compounds.

Inhibitors

Inhibitors are better known as retarding or slowing up agents in reducing the working and accelerating action of enzymes and vegetable starches, etc. The inhibiting compounds are usually made up of heavy metals—HCN, alkaloids and metaoidal compounds. Oxidizing and reducing agents possess inhibiting properties on enzymes and must be avoided in applying them in plant work. Some authorities explain inhibitors as toxic agents in their effect on enzymes.

According to Tauber and other authorities, disinfectant (antiseptic) acting compounds, such as chloroform, sodium fluoride, phenol (carbolic and cresylic) alcohols, thymol, touol, formaldehyde and aldehyde salts possess the properties of inhibiting and in some cases destroying many of the enzymes. Many plant chemists and dyers worry sometimes why their enzyme desizing agents are weaker than usual. In such instances, the plant official should check the agents used in the bath with the enzymatic agents, such as penetrants, also find out if the goods were sized with sizing compounds using strong antiseptics such as listed. There are numerous other compounds possessing disinfectant or antiseptic properties which will destroy or inhibit enzymes, and plant officials should check this point carefully on all new agents and compounds used in with desizing operations. The usefulness of measuring the potency or activity values of enzymes can be applied in practical application by a study of the comparative evaluation based on plant practice.

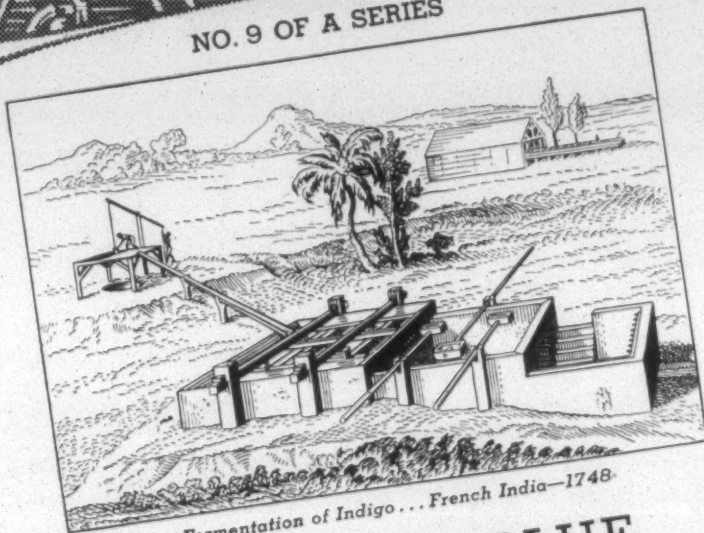
One hundred parts of the—(Continued on Page 50)

Many interested parties have requested discussion of evaluation of the various enzymes as to their potency and proper selection of penetrants for use with enzymes and desizing agents. This article takes up other matters of technical progress made during the past few years in the preparation of enzymatic agents for the desizing of various fabrics constructed of blended yarns. A pertinent and timely thought discussed herein is the desirability of all textile finishing plants providing their plant chemist and technical men with good reference texts on enzymes and other desizing agents.

THE ROLE OF CHEMISTRY

In the Development of Textiles

NO. 9 OF A SERIES



Fermentation of Indigo... French India—1748

NATURE'S BLUE

Indigo, in the past and until recent times, was the most universally known dye, equally effective on all fibers—cotton, silk, wool, and linen. Herodotus described it in 450 B.C. but Indigo was known many centuries before in India, its original home. Its botanical name is "Indigofera Tinctoria", but in different countries and different periods it was known by many names and used for varying purposes.

The Persians called it Nila and used it for dyeing their beards. The Chinese knew it as a blue cosmetic for the eyebrows. The Portuguese of the 16th century knew it as Anil.

Many plants of the New World yielded an Indigo and dyes of this character were known from Hudson's Bay to Peru before the white man came. In recent times, Indigo was grown in many parts of the world, and there were many complaints about the differences in the price and quality and about the deceptive practices of its growers and vendors.

The uniform intensity of synthetic Indigo, introduced during the 19th century, was a great advantage. "Working to specifications", the textile chemist creates products more valuable to industry because of an unvarying uniformity such as is never found in nature.

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Comment

Valuable Information Brought Out at A.A.T.C.C. Convention

MORE than 1,000 persons attended the 24th American Association of Textile Chemists and Colorists convention held Oct. 12-14 at Atlantic City, N. J. A number of important subjects were on the program, including many new developments in textile chemistry.

Some features of the three-day meeting were the annual A.A.T.C.C. inter-sectional contest, a symposium on the "Textile Chemist in the Post-War World," and presentation of five groups of technical papers.

Described as "an entirely new and revolutionary idea," the process by which yarns of exceptional breaking strength, smoothness and evenness, and high density are now being produced direct from roving and without the usual spinning and twisting operations, was explained and analyzed by H. M. Chase, director of the research division of Riverside & Dan River Cotton Mills, Danville, Va.

In addition to giving a very thorough exposition of the principles of conventional yarn manufacture, and a description of the new process of binding the fibers of the roving with synthetic resins and other bonding agents, compacting and tensioning the roving, and curing the resultant product, Mr. Chase exhibited a number of lantern slides in illustration of the more important developments covered by his paper.

The paper was based to a considerable extent on a continuous and intensive program of research carried out in the laboratories and pilot plants of the Dan River Mills during the last few years. Associated with Mr. Chase in this research program is a staff of considerable size. His direct collaborators in the research from which developed the new yarn made direct from cotton roving are Russell B. Newton, vice-president and general manager of Dan River Mills, and Dr. Harley Y. Jennings, a member of the staff and the inventor of the fiber bonding process as applied to conventionally spun yarns.

Referring specifically to chemical treatment of conventionally-spun yarns, Mr. Chase summarized as follows:

"It is needless to say that these data represent only a beginning in this development and that there are many possible applications and commercial products which remain to be explored and developed.

"The comparatively new developments based upon polymerization offer literally thousands of synthetics differing in properties from which to select the most suitable to meet any prescribed specification. They may be thermoplastic or thermosetting."

What percentages of savings in manufacturing costs will eventually be established by this new process would not be estimated at this time by officials of Dan River Mills who attended the Atlantic City meeting, but it was stated that costs should be reduced by "several cents per pound."

The possibility that newly contrived resin fabric coatings may crowd rubberized fabrics out of the post-war textile picture was suggested the same day by Dr. Donald R. Powers of Boston, director of textile research and development for Monsanto Chemical Co. Developments in the field of resin modifications of textile fibers and fabrics, he said, are progressing along two lines: the treatment of fibers and fabrics with solutions of "resin-formers" which are converted into the resin itself after impregnating the fiber; and the surface coating of fibers or fabrics with the polymerized resin from solvent, water dispersion or from friction calender. New resins of both types are finding war application on nylon, the strong rayons, wool and cotton, he stated.

Synthetic Fibers

Dr. Harold DeWitt Smith of A. M. Tenney Associates led the group meeting on synthetic fibers, which featured talks by William D. Appel of the National Bureau of Standards and president of the A.A.T.C.C., H. W. Rose of American Viscose Corp. and Arthur W. Etchells of Hellwig Dyeing Corp. The importance of synthetic fibers to the war effort and the contribution they will make to post-war textiles is the direct result of their unique properties, Mr. Appel pointed out while

stressing their wide range in properties and adaptability. Mr. Rose saw the future for synthetics as continuing to create employment and afford new materials for industry and for the citizens' enjoyment of life. Mr. Etchells presented a resume of some of the problems which beset the practical dyer fabrics made from synthetics.

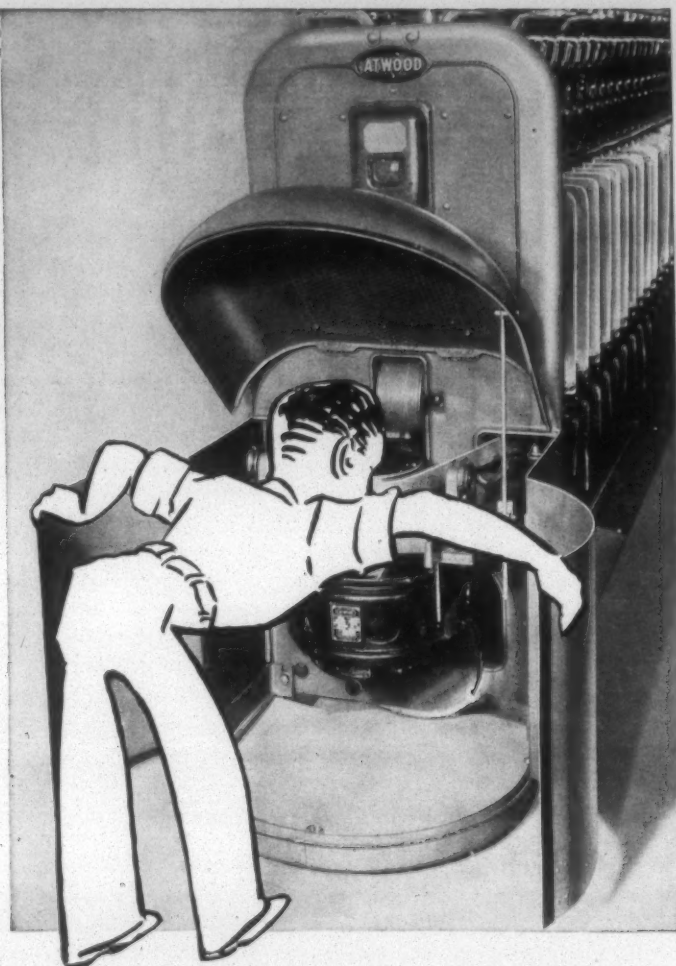
In contrast with kier or jig scouring of fabrics, which requires from 12 to 20 hours, steamer scouring will prepare any type of cloth satisfactorily in an hour or less and the cloth may then be bleached by any of the conventional bleaching processes or sent to the dye-house, according to R. L. Carr of the Mathieson Alkali Works. Mr. Carr stated that this discovery was made during the development of the new Mathieson steamer which can be used for any hot bleaching process as well as for scouring.

Jig Eliminated

"The kier or jig, which is the real bottleneck in cotton processing, has been eliminated from certain processes by the introduction of continuous steaming," said Mr. Carr. "We have found, however, that the use of a steamer for scouring need not be confined to any particular type of cloth nor limited by the subsequent treatment of the cloth. Plant scale experiments have demonstrated that most cloth may be efficiently scoured in half an hour," he continued, "and, even with heavy cloth, good scouring, mote removal and absorbency may be obtained in one caustic steaming of not over one hour's duration. The cloth so obtained is suitable for bleaching by any of the processes in use or for direct dyeing in any shade that normally requires an unbleached dye bottom."

Mr. Carr reviewed the plant scale experiments which had been conducted by Mathieson and cited the results obtained on various types of cloth. The steamer developed by Mathieson, as described by Mr. Carr, consists of a steam-tight chamber which has an internal length of 60 feet and a square cross-section large enough to admit the widest cloth to be treated. Within the steamer is a horizontal belt or conveyor on which cloth is carried in open width. The cloth travels continuously through a hot padder containing the scouring solution, then through the steamer, and out into a washer. Cloth of any weight or — (See Page 56)

Now's a good time to take a look under the hood!

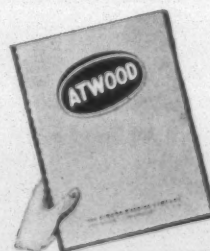


Don't wait until the last minute and then rush in and buy any machinery you can get. Now is the time to line up your requirements and find out what machines will meet them most efficiently and economically.

Producers of textile yarns of all sorts — cotton, worsted, rayon, spun rayon, silk, nylon, or combinations—are right now visiting the Atwood shops and laboratory, discussing their product and production problems with Atwood engineers, finding out what's new and how the latest Atwood developments can be applied to their postwar needs.

Getting fully posted on the new Atwood machines involves no obligation on your part and may save you a great deal of time and money later on. Don't put it off. Now is the time to get in touch with us.

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MILL NEWS

MAXTON, N. C.—Maxton Mills, Inc., which produces coarse cotton yarns, has been purchased by Troy Whitehead, textile equipment dealer of Charlotte. The new owner is installing additional machinery and intends to enlarge the plant. Future plans are to manufacture bedspreads at the mill. J. T. Huneycutt is superintendent and Mrs. J. B. McDonald is office manager.

GREENSBORO, N. C.—Officials of Burlington Mills Corp. have announced that a munitions plant in Rutherford, New South Wales, has been leased from the Australian Government by a newly-formed Australian subsidiary. Plans are being made to weave dress goods, underwear and corset cloths. The Burlington interests are to provide machinery and technicians. Reports are that the new plant will receive much of its raw material from England.

ORANGEBURG, S. C.—South Carolina Cotton Mills, Inc., has been chartered with authorized capital of \$125,000 to manufacture cotton, rayon and other textiles. The firm will operate the plant purchased from Santee Mills, formerly known as Mill No. One. Santee also manufactures textiles at Bamberg, S. C., but this plant was not included in the transaction. Officials of the new corporation are Nicholas Handal, president; George Handal, vice-president; Abraham Handal, secretary; and Joseph Handal, treasurer. They are also officials of S. Handal & Sons, Inc., importers, exporters and distributors of textiles in New York. Output of the Orangeburg plant will be sold through S. Handal & Sons. The plant contains 15,472 spindles and 400 looms.

EASLEY, S. C.—Production at Pennacle Mills, a new spinning plant in Easley, is currently at about 75 per cent of expected capacity. The mill is owned and operated by Easley Fertilizer Co., and is now producing approximately 20,000 pounds of fine yarns weekly. General superintendent is W. F. Davis, and P. W. Pollard is superintendent. All machinery is electrically powered, and the building is equipped with fluorescent lighting, automatic heating and air-conditioning.

AVONDALE MILLS AGAIN HONORED

Officials and employees of the seven Avondale Mills plants in Alabama have been notified that their continued outstanding production of textiles for war uses has merited the Army-Navy "E" award for the third time. This second renewal adds a second white star to the pennants now flying over the mills.

Two units of a textile industry supplier, the Salem, Mass., and Danvers, Conn., plants of Sylvania Electric Products, Inc., recently won the production award for the second time.

BRIDGEWATER, VA.—Celanese Corp. of America has taken an option on an 18-acre plot in the north section of Bridgewater, indications being that the firm plans to construct a large plant on the site. Celanese manufactures knit fabrics at Cumberland, Md., and produces rayon yarns at Burlington, N. C., and Narrows, Va.

ASHEVILLE, N. C.—Swannanoa Textile Corp. has been incorporated by James G. K. McClure, Frank M. Weaver and George H. Wright to deal in all kinds of animal, vegetable and synthetic fibers. Authorized capital stock is \$25,000 and subscribed stock amounts to \$1,000.

SCOTTSVILLE, VA.—The recently completed plant of United States Rubber Co. is now producing rayon tire cord and fabric. The plant was erected and equipped by Defense Plant Corp. at a cost of \$2,240,000, is air-conditioned and windowless, with artificial lighting throughout. When it is in full operation some 300 employees will be engaged in the rayon twisting and weaving processes.

ROCKINGHAM, N. C.—Safie Mfg. Co., which recently took over the No. One Mill of Hannah Pickett Mills, has been officially incorporated in the State of North Carolina. Sixty per cent of the sale price of \$2,400 per share has been paid to stockholders, with the balance of \$1,000 per share to be paid within two years at three per cent interest.

New Viscose Plant Is Rumored

A good deal of discussion has taken place in Southern textile circles on the rumored location of a new American Viscose Corp. plant in Virginia or the Carolinas. This large rayon producer is reported to have taken an option on a 740-acre site near Radford, Va. Word from Spartanburg, S. C., is that there is a possibility the company will erect a \$20,000,000 plant near that textile center. A special committee made up of American Viscose officials is said to be thoroughly investigating every possible location, with freight and coal rates two of the main factors which will have a definite bearing on the selection.

Chances of erecting the plant in North Carolina are considered remote because of this state's existing corporate tax laws.

The War Production Board announced recently that consideration would be given to the importation of a limited quantity of Tibet wool from Calcutta. Importers should file Form WPB-1041 with the wool branch of the textile, clothing and leather bureau, WPB, before Oct. 30. Applications for licenses to import alpaca locks and pieces from Peru will also be considered. Locks and pieces so imported will not be subject to provisions of Conservation Order M-73, the wool order, and will be available for civilian consumption, WPB officials said.



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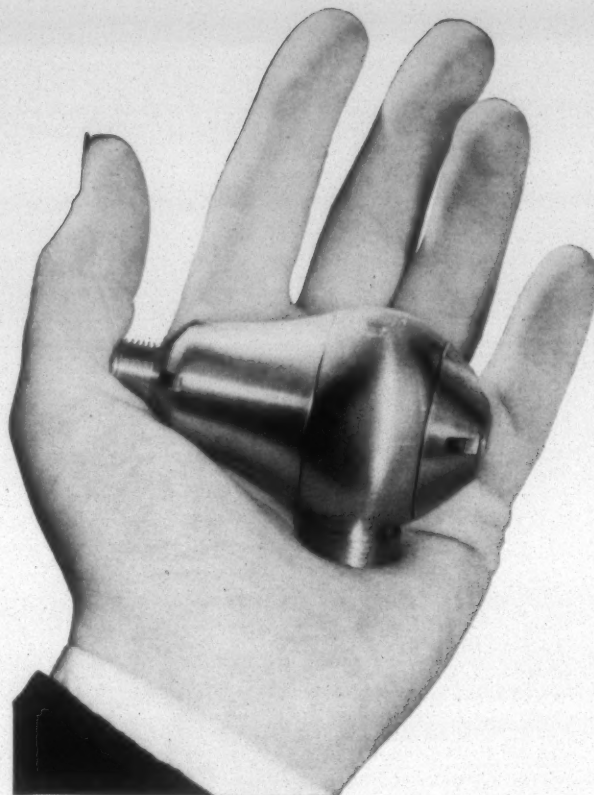
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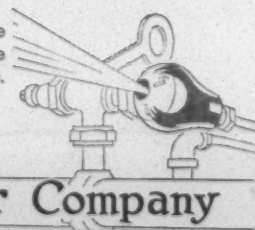
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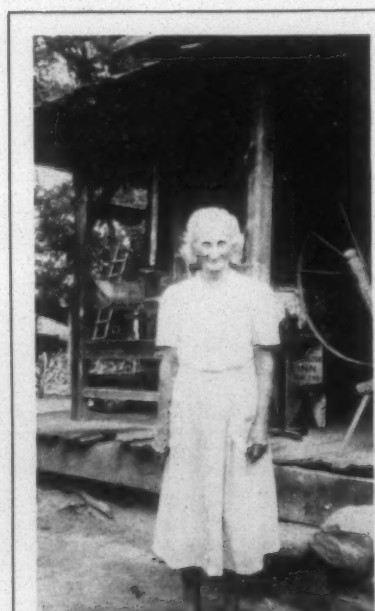
PERSONAL NEWS

Stein, Hall & Co., Inc., of New York has announced the election of J. P. Strasser as a vice-president of Stein, Hall Mfg. Co., Chicago.



Walter B. Dillard, left, will become executive vice-president and agent of Pomona Mfg. Co. at Greensboro, N. C., Oct. 23, succeeding M. A. Bearden, vice-president and general manager. Mr. Dillard has served mills in Georgia as superintendent, and for the past ten years has been vice-president and general manager of New Braunfels (Tex.) Textile Mills. Beginning Nov. 1 Mr. Bearden will do post-war planning in the development of new fabrics for Pomona as well as other plants associated with the owners, making his headquarters at Cincinnati, Ohio.

Albert J. Huber has joined the New York office of Southeastern Cottons, Inc., as a technician, and will specialize in the development of spun rayon fabrics and mill contact work. He was previously with the fabric development department of American Viscose Corp.



Aunt Hattie Lee, shown above, is one of the few living persons in the United States who can take a basket of cotton, card it, spin it and weave it into cloth all with her own hands. She lives near Greenville, S. C., and recently celebrated her 83rd birthday. Aunt Hattie is widely known as the operator of an old-fashioned hand loom which is kept on the front porch of her home, as shown in the illustration. The loom has been seen at numerous textile shows in years past.

William H. Beattie, vice-president and treasurer of Woodside Cotton Mills Co., has been appointed colonel of the textile division in this fall's campaign of the Greenville (S. C.) Community Chest.

Dr. Milton Harris has announced his resignation as director of research of the Textile Foundation and the Textile Research Institute, to become effective Jan. 1, 1945. At that time he and a number of members of the staff who have been working with him will continue their activities in a research and consulting organization to serve the textile and allied industries under the name of the Milton Harris Associates. Associated with him will be Dr. Lyman Fourt, who will be in charge of physics and biophysics, Henry A. Rutherford, in charge of organic development, and Arnold M. Sookne, in charge of physical-chemical research. The laboratories will be located in Washington, D. C.



Dr. Joseph H. Brant, left, has been appointed director of fundamental research for the Institute of Textile Technology at Charlottesville, Va. He holds a Ph.D. in organic chemistry and has done a great deal of productive work on cellulose and its derivatives while connected with the research and development division of Tennessee Eastman Corp. at Kingsport. He served as acting superintendent of this division until going to Charlottesville. With this appointment the Institute of Textile Technology is in a position to proceed with its planned vigorous campaign of fundamental research. Two appointments of division heads (applied research and academic) remain, and as soon as qualified men can be secured the full program will be set in motion.

Five "dollar-a-year" men of the cotton and synthetic textiles division, textile, clothing and leather bureau of the War Production Board, were this month relieved of their day-to-day operating duties by assignment to a consultant status. Harry L. Dalton leaves his post as deputy director of the division to resume full time duties as manager of the Charlotte branch of American Viscose Corp. He has been succeeded by M. V. Macfarlan, formerly chief of the division's synthetic textiles branch, who in turn has been succeeded by Walter P. McGowan. Other executives who have resigned are Dr. A. L. Lippert as chief of the dye and finishing branch, Alex Barth as chief of the rayon converting section, Walter E. Greer as chief of the synthetic fabrics section and H. G. Woodbury as chief of the combed goods section. In most cases these men are being succeeded by officials who have been their understudies in WPB for some time.

Philip S. Hill, left, has been named general sales manager for the Hyster Co. of Portland, Ore., and Glen M. Ede, right, has been appointed assistant manager of the



Hyster industrial truck division. The firm manufactures a complete line of industrial trucks. Both executives have been with the company for a number of years.

Capt. Henry M. Small, who prior to entering the service was assistant paymaster for Bibb Mfg. Co. at Macon, Ga., has received the Bronze Star and Purple Heart for action in battle on the Italian front. He is at present in this country for hospitalization and reassignment.

Frederic L. Akstrand, who recently received an honorable discharge after two years duty with the Army Air Forces, has resumed his connection with the textile division of Borne Scrymser Co. As a textile research engineer Mr. Ekstrand will devote his efforts to fiber processing and to product and process development. His services are now available to textile manufacturers.

Philip A. Johnson, treasurer of Hampton (Mass.) Co., manufacturer of cotton yarns and finished piece goods, has been appointed head of the finished goods section of the consumer goods price division, Office of Price Administration.



Calgon, Inc., has announced the return to the textile field of Maj. W. D. "Doug" Smith, left, formerly with Calgon representatives Eshelman & Potter, of Birmingham and Charlotte, prior to entering Army service two years ago. Major Smith, whose home city is Greenville, S. C., served in the Chemical Warfare Service at Camp Blanding, Fla. He returns to aid Eshelman & Potter with water problems in the Southern textile industry.

Edward P. Taft, for the past 25 years superintendent of the John P. King Mfg. Co. at Augusta, Ga., has joined the engineering firm of John A. McPherson Co., Greenville, S. C., as textile consultant. The McPherson firm specializes in textile plant engineering.

(Continued on Page 41)

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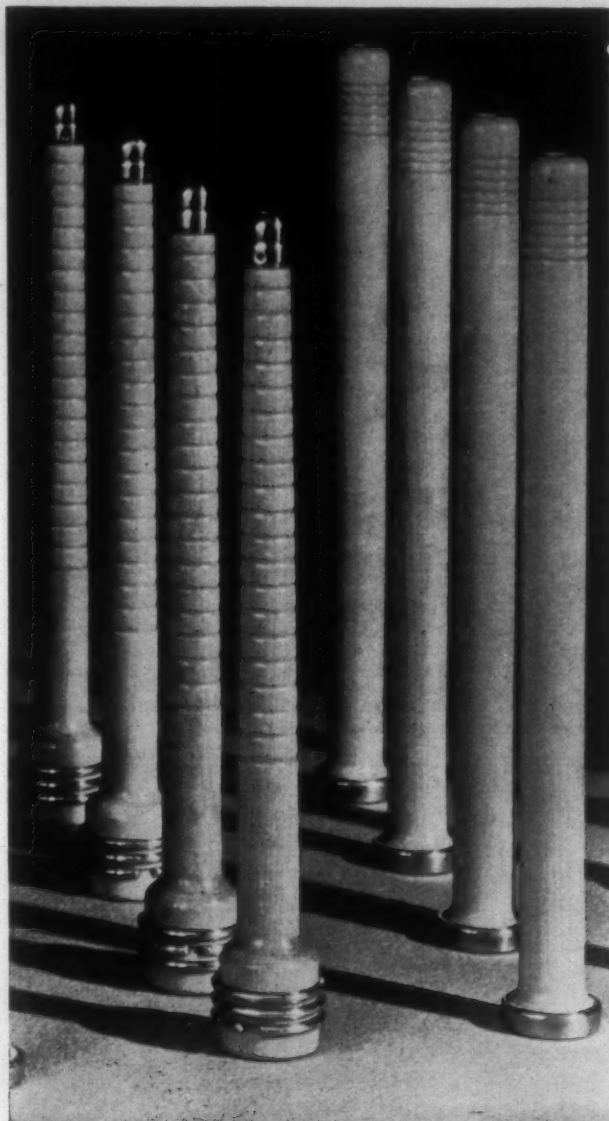
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No Panel Report Made

Under large headlines, some newspapers recently carried stories to the effect that the War Labor Board panel in Atlanta, Ga., had held that a minimum wage of 71.5 cents should be established in the textile industry.

One story said:

The South's great textile industry, already involved in severe dislocations and operating under strict war-time regulations, was confronted today with an admittedly major, new problem because a War Labor Board panel announced at Atlanta a finding that a basic wage of 71.5 cents per hour in this industry is essential to an "emergency standard of living."

The WLB panel has made no such decision and the story was based upon the tricky use of CIO testimony by the CIO.

It is true that labor representatives had testified and argued that a minimum wage of 71.5 was necessary for the textile industry but stated that they were only asking for 60 cents at this time. No decision to recommend 71.5 was made by the panel nor is it expected.

Dr. W. P. Jacobs, industry representative upon the panel, figured that this misunderstanding would come about, so he entered a dissent into records of the hearing. He stated that (1) there are no substandard wages or living conditions in the Southern textile industry; and (2) that the labor union's contention that 71.5 cents per hour was "really necessary" is based on illogical reasoning in that individual income cannot be compared with family needs (meaning here that a whole family does not have to

depend on a 71.5-cents-per-hour wage, because in nearly all cases more than one member of a family works and contributes to family income).

Undoubtedly the story was put out by CIO representatives in an attempt to influence the decision of the War Labor Board at Washington, D. C., in the case of the 23 cotton mills and where a minimum wage of 60 cents per hour is being asked!

In an interview at Charlotte, Harrison Hightower of Thomaston, Ga., president of the American Cotton Manufacturers Association, referred to the statement of the WLB panel's as their definition of "substandard" and made an excellent statement against same.

It would appear that Mr. Hightower had also been deceived and was at that time under the impression that the statement was based upon a decision of the WLB panel.

Mr. Hightower is quoted as follows by Charlotte newspapers:

Mr. Hightower, as the spokesman for the industry because of his official position, expressed the view that the WLB panel's definition of "substandard" was arbitrary and theoretical. Wages should be regarded as substandard only when they are below those of comparable industries in this area, or if they have not been increased by an amount equal to the cost-of-living increase since he contended, the textile industry's wages compare favorably with prevailing wages in other industries of the same area.

Wages in textile mills in the South were for many years based to a large extent upon the earnings which families could expect from the work upon farms.

In the days between 1890 and 1900 when five cents per pound was about all that farmers could expect to receive for their cotton, farm wages and farm returns were very small.

Whole families of tenant farmers lived in one-room shacks and their existence was miserable.

Many families moved to cotton mill villages where they could have better homes with schools for their children, and even though the pay was small, it was far better than upon the farms.

It was but natural that wages in the cotton mills should be based upon the pay of those who worked for wages upon the farms, or the returns which share croppers could obtain for the work of themselves and their families because people were moving from the farms to the mills.

Had the prices which farmers could secure for their cotton, tobacco, corn and other crops risen to the point that farm returns and farm wages were upon a better scale, they would have immediately been reflected in better textile wages.

The low wage scale in the textile mills of the South was the direct result of the low returns which could be secured from farming.

Unfortunately there were many periods of depression in the cotton manufacturing industry and fre-

DYEING AND FINISHING

Notes on Dyes and Dyeing

By GEORGE BROWN

Practical Application of Direct Dyestuffs—Part Seven

Part Six of this series dealt briefly with the description of padding directs by direct nip or immersion rolls, jig and pad-jig dyeing and continuous piece goods dyeing with directs. Practical application procedure and recommendations were given on handling padding, jig and pad-jig operations. This article will continue on the practical application procedure for continuous and dyebeck procedures with direct and direct-and-developed colors.

THE light and medium weight goods give the best results when run on a continuous range. Plants dyeing directs on cotton goods by the continuous method run them because this procedure gives lower dye cost or they require some subsequent aftertreating or finishing operation which can be run without added costs of handling as would be the cost if goods were padded or jig dyed. A large percentage of goods are kiered and chemically bleached or given a peroxide continuous bleach before dyeing on the continuous dyeing range. These goods are so prepared because high speed is essential to obtain the production needed from these machines. Some constructions of goods may be dyed direct from the bale or singed, malted, dried and run through immersion roll into pad-dye bath containing wetting agent.

Some of the usual procedures for dyeing directs are along the following lines:

1. For light to medium shades, the prepared kiered or bleach bottomed goods are entered directly through the nip of the roll into the pad box containing dyebath, then run into box containing aftertreating liquors, then through wash box and onto dry cans. In case the aftertreating bath contains a cation compound it is more desirable where a hot flue dryer or over-head dry cans are available to dry the dyed goods, then cool them by "skying" and running into another pad box containing the cation compound; padding at 100° F. but seldom over 120° F., then run directly to dry cans without subsequent cold rinse.

2. For heavy shades, it is best to run the prepared goods under an immersion roll and into pad, over skying rolls, thus permitting the dyed goods a short period for the padded color to penetrate and level up before the goods enter the booster box, which is similar to a jig and like the procedure of padding a direct color and then jiggling it to

obtain better penetration and levelness on the heavier shades without excess dye costs. If an aftertreating bath is to be run using formaldehyde or bichrome and bluestone, then the dyed goods can be run through cold rinse, then directly into the hot aftertreatment and given the necessary hot and cold wash before drying. Whenever the dyed goods are to be given a cation aftertreatment, it is best to dry as described in this paragraph, cool by skying and pad through the cation bath and dry on cans.

3. If gray goods are to be dyed on the continuous range, the dyeing speed must be reduced considerably and a rather large amount of wetting agents must be used in the pad and booster boxes so as to obtain satisfactory penetration. On gray goods, usually the best results are obtained by entering the goods under an immersion roll and into padder rather than direct into the nip of the pad rolls.

4. On goods to be given a waterproofing aftertreatment it is essential that the amount of penetrant be kept to the minimum amount that will give level dyed, well penetrated cloth; otherwise, the residual penetrant remaining in cloth decreases the waterproofedness effect of finished cloth. So, taking this into consideration, goods that are to be given special aftertreatment such as waterproofing are usually dyed on well bleached bottomed goods so as to insure well penetrated and level dyed shades without penetrants if possible, or minimum required. The well bleached bottomed goods also permit more uniform take-up of the waterproofing agent. The dyed goods are best dried and run through the waterproofing agent on an immersion roll pad at 120-140° F., keeping the bath sufficiently acid so as to insure a rapid waterproofedness action taking place immediately upon drying.

Selection of Colors

Using the most soluble and uniformly exhausting fast-to-light directs of this series, a dyer can work out formulas that will feed uniformly and give consistent results free from too much shading. It is sometimes necessary to wrap the first few dry cans when special aftertreatments or waterproofing treatments are given goods so as to prevent variance in shade on the face and back of cloth.

Directs showing moderate fastness can be used but require more care to prevent shadiness during dyeing. This group of colors varies more in rate of exhaustion than

the fast-to-light ones, which are slower and therefore give more uniform exhaust rates.

Dyebecks make use of the rope form as opposed to the open width dyeing operation such as the paddler, jig, pad-jig and continuous piece goods dyeing range. Dyebecks, winches and other allied forms of these types of rope form dyeing equipment are rectangular shaped boxes with varying depth according to type of goods to be dyed on them. The goods are run over elliptical or odd shaped reels which pull the goods through the dye liquor.

Enclosed Dyebeck for Rayons

The enclosed dyebeck is not as important in dyeing rayon and rayon blends as in knit goods. This is due mainly to the fact that these blends contain synthetic fibers such as acetate and casein fiber in addition to wool so the high temperatures are not always essential, though the enclosed machine gives a more uniform dyeing temperature throughout machine which is not obtainable on open machine. On many of the rayon blends gray goods are entered directly into dyebeck, a prescouring is given. This removes the soluble type of sizing agents used on many synthetic yarns. The scoured goods are given a flush-over, cooled gradually, then bath is dropped. If not clean, a fresh bath is prepared for dyebath to start at 120° F.

In the dyebath, the penetrant and other dyeing assistants such as Calgon or phosphates are entered, the reel allowed to turn over several times to mix same thoroughly in bath. The direct colors are strained into false front, mixed thoroughly and steam line opened up to disperse throughout bath. It is best to allow the goods to run 20 minutes in 120° F. bath before raising temperature slowly to 180-205° F., where it is run for 40 minutes, then add salt and run for 40 minutes before sampling for shade. Whenever there are other fibers such as acetate in the goods, these colors may be added in with direct colors and bath runs as outlined. After shade is approved, the bath is run over and gradually cooled. This prevents creasing and chilling rayon too quickly which would cause crease and break marks in finished goods.

Possible Textile Uses for New Resin

Carbide & Carbon Chemicals Corp. has recently developed, and is still experimenting with, a new synthetic resin which, according to press reports, is suited not only for molding and casting purposes but also for the extrusion of both yarn and staple textile fibers. Its specific gravity of 0.92 is one of its most remarkable characteristics, indicating an unusually high covering power.

Polyethylene is produced in the form of granules ready for the extrusion process. Coloring matter is already contained in the material and, if desired, titanium dioxide may be added as a dulling agent. Being normally translucent, polyethylene can be made darker by the use of pigments. It is as yet undecided as to whether extrusion and sale of the filaments will be carried on by Carbide & Carbon Chemicals Corp. or whether rayon producers will be invited to participate in the exploitation of the product.

Rayon Plant Using Youthful Workers

The American Viscose Corp. plant at Meadville, Pa., which manufactures acetate rayon yarn, has inaugurated "victory shifts" on which high school boys and girls 16 years of age or older go to work on general production jobs to aid in the war effort. The Meadville plant is now utilizing two "victory shifts" on which students are employed on light work in the process department from 2:30 to 7 p. m. and 7 to 11 p. m. daily except Friday, and on Saturdays for one full shift from 7 a. m. to 5 p. m. Another group of students works only one day a week, on Saturdays.

Students are being utilized on light work only, plant officials point out, so they will not be too tired to do their school work properly.

Directors of American Viscose Corp. at their regular meeting Oct. 4 declared dividends of \$1.25 per share on the five per cent cumulative preferred stock and 50 cents per share on the common stock, both payable Nov. 1, to shareholders of record at the close of business Oct. 16, 1944.

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PERSONALS

(Continued from Page 34)—

Thomas H. Urmston has returned to the post of assistant director of sales, acetate division, E. I. du Pont de Nemours & Co., after serving as a lieutenant in the United States Naval Reserve since early in the war.

Joseph B. Rumsey has resigned from the DuPont division to join Beaunit Mills as an executive dealing with supplies and materials. William Richter has retired as general manager of the fabrics and finishes department, and has been succeeded by J. Warren Kinsman.

Dr. William Kirk, manager of the Chambers Works at Deepwater Point, N. J., will succeed Mr. Kinsman, who until recently was assistant general manager of the company's organic chemicals department. Robert J. Goodrich is now manager of the Chambers Works, with Dr. Samuel Lenher his assistant. Warren A. Beh has been promoted to director of nylon sales, and George S. Demme has been named his assistant.

Charles M. Switzer has been made director of nylon production. Dr. Elmer K. Bolton, the company's chemical director, has been chosen to receive the American Chemical Society's Perkin Medal in recognition of his outstanding accomplishment in the field of industrial research.

Emory L. Howell has joined the research and development staff of Dayton Rubber Mfg. Co. at its Waynesville, N. C., plant. He is a graduate of Clemson College and was formerly associated with Laurens (S. C.) Cotton Mills and Erlanger Mills, Inc., at Lexington, N. C. The Waynesville plant specializes in Dayton Thorobred loom supplies and Dayco roll coverings for the textile industry.

Miss Rachel Penn Lane has been appointed librarian of the new library at the school of textiles, North Carolina State College, Raleigh. Her employment was made possible through funds donated by the North Carolina Textile Foundation. Plans have been drawn up to make the new library one of the most modern and complete units of its kind in the nation. Facilities, which will be installed soon, will be available to students, faculty and research staff of the school, and to North Carolina textile mills.

Harold W. Whitcomb has been appointed assistant general manager of the Marshall Field & Co. manufacturing division, with headquarters at Spray, N. C. Recently in charge of post-war planning co-ordination for the company, his new duties will center around the larger phases of the manufacturing division's forward planning, with particular attention to capital expenditures, research and new products.

Charles S. Northen of Avondale Mills at Sylacauga, Ala., was elected head of the Carded Yarn Association at a meeting of the organization in Charlotte this month. He succeeds Harvey W. Moore of Brown Mfg. Co., Concord, N. C., who automatically became vice-president of the group. E. Owen Fitzsimons was re-elected secretary-treasurer. Statements made at the meeting indicated that a revision of the industry ceiling prices is probable in the near future.

Charles T. Brown, well-known former cotton broker at Charlotte, has resigned his position with the Charlotte branch of the Office of Price Administration to become Southern representative for Seaboard Commercial Corp. of New York. Mr. Brown will serve the textile industry from headquarters at Charlotte.

Frank E. Slack has been re-elected president of the Association of Carded Yarn Distributors. Members of the organization, which has headquarters in Philadelphia, named H. I. Briggs chairman of the board, Charles S. Schell treasurer and T. Ewing Montgomery secretary-counsel.

Floyd W. Jefferson of Iselin-Jefferson Co. has been appointed chairman of the

cotton goods section of the New York War Fund Drive. He has the task of seeing that the trade meets a minimum of \$400,000 in contributions.

Russell T. Fisher was re-elected president of the National Association of Cotton Manufacturers at the annual meeting Oct. 5 at Boston. Albert H. Crossman and Rudolph O. Dick were named vice-presidents.

H. R. Whitener, formerly associated with several yarn mills in North Carolina, has joined the teaching staff of the North Carolina Vocational Textile School at Belmont as instructor in yarn manufacturing. Mr. Whitener, familiarly known as "Mike", recently received an honorable discharge from the Army.

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		Wellington, Sears Co.	48
		Whitinsville Spinning Ring Co.	63
		Williams & Sons, I. B.	47

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Experienced supply room manager for Southern mill; permanent job with good future. Apply, giving reference and experience.

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- 40—Frames H & B Long Draft Spinning.
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- 4—Frames are 1905.
- 43—Frames are 1911.
- 1—Frame is 1913.
- 5—Frames have 208 Spindles each.
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- Gauge—2 $\frac{3}{4}$ ".
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Spindle length—11 $\frac{3}{4}$ " tip to tip.
Spindles take an 8" quill.

The above are equipped with Meadow Idlers, Band Driven.
Subject to prior sale.

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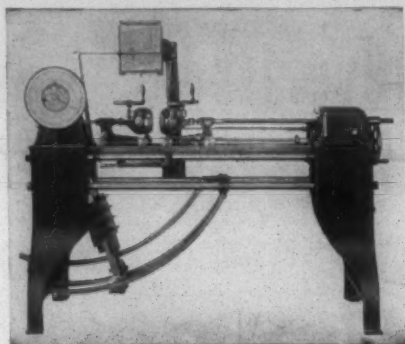
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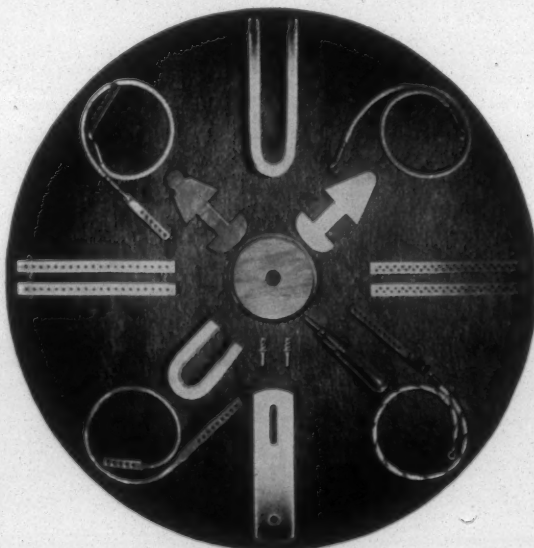
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Meetings of Interest To Textile Men Are Scheduled

The meeting of the Master Mechanics division of the Southern Textile Association at Hotel Charlotte in Charlotte Oct. 25 will be the first of a number of gatherings scheduled in the near future which should interest persons connected with the textile industry.

C. C. Elliott of the maintenance department of Riverside & Dan River Cotton Mills, Inc., Danville, Va., will be featured at the S. T. A. Master Mechanics session. Mr. Elliott has in recent months instituted a system at Dan River whereby maintenance costs have been considerably lowered. All departments of the Dan River plants are scheduled for regular overhauling of machinery, thus preventing breakdowns in production. Mr. Elliott will explain the details and advantages of his system. Also on the program is C. A. French of Industrial Heat Engineering Co. at Greenville, S. C., who will be available for discussion of heating equipment maintenance.

Other Southern Textile Association meetings, all set for next month, are as follows: Eastern Carolina division at the Erwin Cotton Mills Co. auditorium in Durham Nov. 4; weavers section of the South Carolina division at Clemson College Nov. 11; and Piedmont division at the North Carolina Vocational Textile School, Belmont, Nov. 18.

The North Carolina Cotton Manufacturers Association will hold its annual convention at the Hotel Charlotte Nov. 10, with the first session convening at 10:30 a. m. Among speakers scheduled are Dr. George D. Heaton of Charlotte, who will discuss industrial relations; Robert M. Hanes, banker from Winston-Salem, N. C.; and R. Gregg Cherry, governor-elect of North Carolina. A tax forum will be held the afternoon of Nov. 9 for mill executives particularly interested in existing tax laws. Also featured at the meeting will be the reports of R. A. Spagh, Jr., president of the association, and Hunter Marshall, secretary.

The Textile Research Institute's annual parley will be held the same day, Nov. 10, at New York. A number of technical subjects are scheduled for discussion and treatment by speakers at the morning, luncheon and afternoon sessions.

The National Chemical Exposition and National Industrial Chemical Conference, sponsored for the third time by the Chicago section of the American Chemical Society, will be held at the Coliseum in Chicago Nov. 15-19. Although this occasion is not primarily relative to textiles, a number of addresses and exhibits of interest to executives in this industry have been arranged.

The Cotton-Textile Institute, Inc., will hold its annual meeting at the Waldorf-Astoria Hotel in New York Nov. 17. The meeting will be streamlined, consisting of a general session in the morning, a luncheon, and in the afternoon a series of committee or panel sessions at which problems confronting the industry will be discussed.

The National Association of Manufacturers' 49th annual Congress of American Industry at New York Dec. 6-8 will be dedicated to planning the reconversion of industry to peacetime economy. This meeting will take place at the Waldorf-Astoria Hotel.

A 44-page booklet, "The Base Period Problem of the Cotton-Textile Industry," has been published and made available by the Cotton-Textile Institute, Inc.

Japanese Making Clothing Fabrics From Ramie and Other Fibers

A recent Japanese-sponsored broadcast from Macassar, on the island of Celebes, announced the harvesting of the first crop of ramie, with which the authorities have been experimenting to replace the dwindling supplies of cotton. Ramie, which before the invasion of the Netherlands East Indies was imported from British India, was used exclusively as a substitute for jute in the making of sacks for storing sugar and rice. The Japanese, however, have found another purpose for the coarse plant—they will use it as clothing material. According to the broadcast, "the making of clothing (from ramie) for local inhabitants by means of hand weaving has been successful, and a great deal is expected from this process in the future."

Not only ramie, but also the leaves of banana and pineapple trees are being converted into material for clothing. Japanese naval authorities in Bandpermasin, in southern Borneo, have installed a spinning mill in that city, where Indonesian girls have been put to work making "endless streams of yarn." An enthusiastic radio commentator, broadcasting from Bandjermasin Aug. 29, stated that the spinning mill is under the direction of a Tokyo raw cotton company. "The machines installed in the mill are old-style ones," he said, "and they were imported from Java."

"The management of the company," he continued, "also revealed that it has succeeded already in the production of dyestuffs for dyeing clothing in colors of the native girls' liking. The management of the company, dwelling on the promising future of the industry, said there are plenty of materials besides raw cotton, since southern Borneo abounds in fibers such as are obtained from banana leaves and pineapple."

Water-Free Compounds Manufactured

Kilcommons Chemicals Corp. of Providence, R. I., recently announced manufacture of a type of cation active and substantive finishing compounds claimed to be the first offered to the industry which are entirely free of water. These fully-concentrated finishing compounds are available for application on all fibers including cotton, rayon, silk, wool or aralac. No extra operations are involved on the part of the users of these concentrates. Shipment is made in blocks of proper consistency for easy cutting and, with the exception of Kilco-Mine S and Kilco-Terge-A, these blocks are packed in paper containers. Transportation savings are considerable, as barrel costs are eliminated. Chemical costs in many cases show savings of 50 per cent under the average.

Bulletins Issued By Graton & Knight

A colorful series of bulletins on textile leathers is being distributed by Graton & Knight Co. of Worcester, Mass. Each bulletin covers one major item in textile leathers, the important features of this particular item, and its place in Graton & Knight's Orange Line. Photographs of manufacturing processes illustrate the descriptive matter. The first three bulletins dealt with the "Pickmaster" picker, the two-fold check strap and the complete Orange Line. Copies of this material may be secured by writing Dept. T. B. of the company.

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The only variation that ever occurs in Carter Travelers is in the steady improvement of their quality that has been going on since the beginning.

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Processing Rayon on the Cotton System

(Continued from Page 26)—and the second strips discarded. As far as the other deniers are concerned, the strips are re-used without re-carding. However, in some cases here higher quality work would result if they should be handled in like manner as the finer deniers.

Card clothing, 90's and 100's, gives very satisfactory results on three denier and coarser. For $1\frac{1}{2}$ denier or finer, 110's and 120's are preferred. However, it has been found that the results are still better on the one and $1\frac{1}{4}$ denier types when 120's and 130's clothing is used.

The drawing is not materially different from that commonly used on cotton. However, care must be exercised in arriving at proper settings since rayon staple tends to stretch quite readily. Settings of $\frac{1}{4}$ -inch, $\frac{3}{8}$ -inch and $\frac{1}{2}$ -inch over the staple front to back has proven quite satisfactory. Leather, synthetic, cork and metallic rolls are used on rayon staple. However, for the one and $1\frac{1}{4}$ denier preference is given to the leather. For the coarser denier all of the various mentioned rolls work very satisfactorily. The two-process conventional drawing system and the long draft drawing system have given good results.

Rayon staple is being processed on both the conventional and the long draft system of roving and each type has its place. However, in many cases, a combination of two is used. For instance, some mills find themselves very versatile by using long draft slubbers and conventional roving frames. One thing to note in changing from cotton to rayon on the roving frames is to decrease the over-all speed of the machine depending, however, on the type rovings to be produced and the staple length and denier used. For instance, if one were using a fine denier he would find if necessary to reduce his over-all-speeds by 25 to 30 per cent since this particular type would take much less twist.

It is quite important to maintain correct tensions since rayon staple fibers are usually much longer than cotton fibers, and there is a tendency for the roving to stretch more readily than cotton and still run without difficulties. In fact, tensions should always be on the slack side so as to

insure a minimum of stretch in the roving. The lay should be given consideration since the lays per inch vary according to the denier being processed. Usually the $1\frac{1}{2}$ denier will condense about 25 per cent more than cotton roving of the same count. However, in the case of blends for wool and some other fibers the lay used would probably conform very near the cotton standard. Leather, cork and synthetic rolls are being used on rayon staple. However, the selection here depends entirely on the denier being processed and for the coarser deniers the synthetic and cork are very satisfactory. The leather performs better on the one deniers and $1\frac{1}{4}$ deniers and in some cases on the $1\frac{1}{2}$.

Few Changes in Spinning

The spinning of rayon staple is very similar to that of cotton and only a few changes are necessary. Yarns today are spun on both the conventional and long draft systems and here again there are advantages according to the type of fibers being processed. Usually one finds that a long draft will produce yarn strength of about five per cent stronger than the regular conventional system. Other than this, unless there is a larger variation in the staple length, conventional system gives good results. Usually when lengths of staple are processed from $1\frac{9}{16}$ inches up and where it is necessary to use conventional spinning the slip draft or Washburn type roll is used. The standard conventional wide slip roll will handle staple lengths from one inch to approximately $2\frac{1}{4}$ inches, whereas the standard long draft systems usually handle from one inch to $1\frac{9}{16}$ inches. There are, however, some special machines that will accommodate $1\frac{9}{16}$ inches to three-inch lengths. One of the advantages of these specially-built machines is that larger diameter rolls are used and this results in less tendency for the rolls to lap up and eliminates to some extent difficulties that arise in using small rolls. In fact, the larger rolls throughout the various roving and spinning processes have proven better in many ways, particularly for mills using $1\frac{9}{16}$ -inch staple and up. At the spinning, rolls are used very similar to those used for the roving frames and each

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type has its advantages depending entirely on the denier being processed. For those running crepe yarns, where high twists are used, the synthetic rolls are preferable since in the case of the cork and leather the high twist tends to eat into the rolls and the roller life is decreased immensely. Other than this the cork or leather rolls have very satisfactory results.

The spindle speed at the spinning is adjusted according to the amount of twist in the yarn and usually it is necessary to reduce the over-all speed in order to maintain roll speeds comparable to those commonly used on cotton of the same count.

Labor Advisory Committee Studies Textile Manpower Shortage

Labor shortages and their effect on the production of cotton textiles for military and civilian requirements were discussed at a recent meeting of the cotton textile labor advisory committee, the War Production Board reported this month. The committee declared that low wages were the basic cause for the manpower problems of the textile industry, but added that other factors also hampered production. High labor turnover is the real problem, the committee said.

To offset labor shortages, work loads in some mills are being increased, with the result that many workers are leaving their jobs while others are suffering fatigue, thus substantially reducing the productivity per man and per machine, committee members reported. The committee felt that improved personnel practices were necessary to correct some of the ills of the industry and increase production.

The committee urged WPB to take more vigorous action to effect the fullest utilization of both textile labor and machinery in the interest of the war effort. A task committee will be appointed soon by the cotton and synthetic textiles division of WPB's textile, clothing and leather bureau to discuss critical production problems of the industry and to submit labor's suggestions for their solution. This committee will include representatives of both the Textile Workers' Union of America (C.I.O.) and the United Textile Workers of America (A.F.L.)

The committee was informed that textile production for 1944 was estimated at 9,000,000,000 yards, as against requirements of 12,000,000,000 yards, with the greatest shortages in the field of cotton duck. Present indications are that only half of the duck requirements for the fourth quarter of 1944 will be produced, the committee was told. Maj. Herbert Rose, special assistant to the director of the textile, clothing and leather bureau, was the government presiding officer.

Hughes Representing Emmons in Southwest

The Emmons Loom Harness Co. has appointed the R. D. Hughes Sales Co., 1812 Main Street, Dallas, Tex., as its representative in Texas and Arkansas. Mr. Hughes is well known in the textile mills in this territory and will handle the complete Emmons line of reeds, flat heddles, heddle frames, twine harness, "J-W" textile aprons and other weave room accessories. Storer y Cia. of Buenos Aires has been appointed Emmons' representative for Argentina and Uruguay to take care of the increasing demand from that area.

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A substantial stock of various weights and widths is maintained in the "heart" of the textile industry . . . Greenville, S. C. Service is keyed to the demands of the textile industry. Quick shipments and the close personal attention of its Greenville representative are evidence of that.

For textile belting, Samson hair-on check straps and loom leathers, consult —

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PACKAGE DYEING AND BLEACHING

All Type Colors on Cotton Yarns

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Cotton Goods Market

Hope for a renewal of trading in cotton gray goods and expectancy of mills to release some goods have been without avail. Recent sales are reported at a minimum in all sections. Some minor lots were let out against priority ratings, and a few releases to the Treasury Department for Lend-Lease were noted, but the total was held to have been extremely small. There was, however, no recession in the persistent inquiries for all types and construction of staple fabrics.

Continued surprise is being registered by buyers over the almost complete absence of trading and the question repeatedly put as to what justification mills had for withholding goods. The answer of mill men was that no goods were available to sell, being either tied up on government contracts or sold ahead too far on other priority-rated business to risk further commitments under present market conditions.

As previously noted, many sellers did considerable forward selling following the establishment of ceiling increases on the several groups of fabrics. During this period they covered certain needs of the military, essential industries and other priority-rated regular customers to the extent of their estimated production for the last quarter, and in a few instances into the first quarter of next year.

Some selling activity is promised soon in two or three mill centers which have not as yet committed all production for the present quarter. Other houses say that unless conditions take a decidedly favorable turn, sales in nearby weeks will be confined for the most part to minor lots, and few additional forward contracts will be negotiated until late in November.

Seriousness of the bag situation cannot be too strongly emphasized, according to leading manufacturers. Failure of the several orders issued by WPB to relieve their distresses has now placed them in a desperate position. This is seen as growing even worse when mills effect conversion of sheeting looms to make duck and tent twills, which was ordered completed by Oct. 28. While Direction Two of L-99 is commandeering only 12½ per cent of Class A sheeting looms, the loss of production through time lost in adapting machinery and through further unbalancing of mill operations, will decrease sheeting output to a much greater extent, it is contended, reducing available supplies not only for bag makers, but the military, essential industries and all others users as well.

Mills are said to be making every effort to furnish needed goods, but only meager yardages can be allotted. The paucity of present releases, as compared with normal requirements, reveals the acuteness of their situation.

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Cotton Yarns Market

The Census Bureau has reported that cotton consumed during September totaled 793,086 bales of lint compared with 841,490 in August this year and 872,155 in September last year. This included: in cotton-growing states, 703,152 bales, compared with 742,389 bales in August this year, and 759,954 in September last year; and in the New England states, 71,788 bales, compared with 79,037 and 87,661.

Cotton spindles active during September numbered 22,279,574, compared with 22,240,676 during August this year, and 22,630,432 during September last year. This included: in cotton-growing states, 17,372,944, compared with 17,350,976 in August this year, and 17,395,916 in September last year; and in the New England states, 4,362,206, compared with 4,347,238 and 4,679,882.

A United States cotton crop of 11,953,000 bales of 500 pounds gross weight is forecast by the Crop Reporting Board of the United States Department of Agriculture, based upon information as of Oct. 1, 1944. The present forecast is 470,000 bales, or four per cent above the forecast of 11,480,000 bales estimated on Sept. 1, and compares with 11,427,000 produced in 1943 and 12,455,000 bales for the ten-year (1933-1942) average.

Carded and combed cotton sale yarn production during the second quarter of the current year fell sharply under the corresponding period of 1943, and was below the totals for the preceding period of this year, according to official reports.

Carded cotton sale yarn produced in April-June, 1944, totaled 244,471,000 pounds as compared with 296,672,000 pounds in the same period in 1943 and 258,539,000 pounds in the first quarter. Carded cotton weaving yarns (other than carpet) totaled 93,988,000 pounds, as against 119,850,000 pounds in April-June, 1943, and 97,449,000 pounds in the first quarter of this year.

Combed cotton sale yarn output for the second quarter amounted to 56,224,000 pounds, as compared with 69,569,000 pounds in the same quarter in 1943, and 59,662,000 pounds in the first quarter of this year. Combed weaving yarns accounted for 25,771,000 pounds in the second quarter of 1944, as against 36,560,000 pounds in the second quarter of 1943 and 27,621,000 pounds in January, February and March of this year.

KNITTING WEAVING YARNS

Sell us your surplus yarns. Firsts or mixed. White or colored. Cotton or synthetics.

Wire or write offerings

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Gastonia, N. C.

BEST

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Universal Standard Ring Travelers cost you less because they give you better service. They're durable, uniform, precision made, with Bowen patented Bevel Edge to insure smooth even yarn. They reach you in perfect condition with full count assured because they come to you in sealed metal containers. Samples on request—write direct or to your nearest representative.

Send your exact requirements for samples which you can use and prove in your own mill. Write direct, or to the nearest representative.

Sealed metal containers guarantee that your U. S. Travelers will be full-count, factory-perfect.



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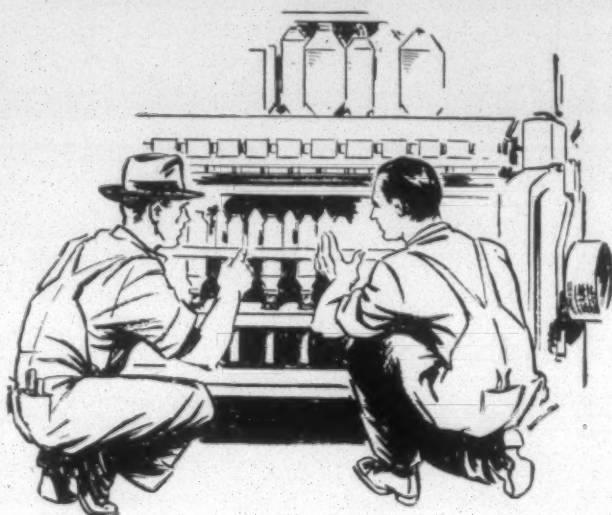
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Ball Bearing Tension Pulleys

By the elimination of slow-downs due to damp-weather, dry-weather or "Monday Morning" band troubles, the yarn production of your spinning frames can be materially increased—and rejects due to uneven twist eliminated.

Meadows Ball-Bearing Tension Pulleys maintain uniform band tension in *any* weather, at *all* times—eliminating slack yarn, increasing spindle production and assuring a uniform twist. One pulley for each four spindles—no doffing of frames necessary for installation Lubrication once every 5000 hours. Write us for information, or consult one of our representatives.

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Providence, R. I.



MEADOWS MANUFACTURING CO.
ATLANTA, GEORGIA

Desizing Agents Useful in Processing Blends

(Continued from Page 28)—commonly used malt enzymes contain approximately the same number of activity units as ten to 12 parts of the highly activated and concentrated animal enzymes (pancreatic types). One hundred parts of the highly activated and more concentrated malt enzymes contain approximately the same number of activity units as 14 to 16 parts of the highly activated and concentrated animal enzymes (pancreatic). One hundred parts of the higher activated bacterial type enzyme contain approximately the same number of activity units as 30 to 40 parts of highly activated animal enzymes. These comparative plant evaluations were taken on the basis of the ideal operating conditions for each type of enzyme tested. The variations are due largely to plant conditions that are difficult to control as well as the other variables such as the different constructions of greige goods desized and the different sizing agents that are solubilized through action of the enzymes.

Penetrating agents to be of value in enzymatic desizing operations must possess the following properties, or they cost the plant more to use than they are worth:

1. Freedom from any disinfectant or antiseptic properties such as possessed by phenolic, cresylic, carbolic, alcohols, formaldehyde and numerous other agents.
2. Possess good penetrating action at 110-140° F., as gray goods must be padded at that temperature range. Otherwise the enzymatic desizing bath is partially destroyed in many cases by padding at too high a temperature.
3. Possess good carrying, dispersing and penetrative value on enzymes so as to help it penetrate into the gray goods and thus obtain a uniformly soluble sizing when goods are scoured off.
4. Penetrant must be neutral, free of alkalies or acid agents unless under specific cases these are required for use with the desizing enzyme. This is to be determined by the desirable pH required for enzyme used.
5. Penetrants made from a single compound are usually of a more practical value for use with enzymes than ones compounded from two or more separate products, as these may be affected by the enzyme especially if they are of protein nature.

Vinyl Polymer Control Under M-300

The War Production Board has revoked Order M-10, governing the allocation of vinyl polymers, and transferred control of the chemical to Order M-300, the general chemicals order. This is in line with the WPB policy of bringing chemicals and allied products under the framework of a single order.

According to provisions of the new Schedule 54 (vinyl polymers) of Order M-300, the small order exemption for experimental use was raised from 50 to 200 pounds. The small order exemption remains 50 pounds for all other end-uses.

The Providence, R. I., office of American Aniline Products, Inc., was moved to 171 Pine Street Oct. 1. It was formerly located at 55 Pine Street. The office is now located at street level, which will prove a great convenience to local and long distance truck. These new offices and laboratory have been decorated with a modernistic viewpoint.

Activity in Wool Industry Reaches All-Time High

For the first time in its history the wool industry of the United States is a billion dollar enterprise, with textile output—spurred by military demands—up 100 per cent since the beginning of the war, according to an analysis in a recent issue of *The Index*, quarterly publication of the New York Trust Co. The survey emphasizes, however, that the disposal of large surplus wool stocks is a problem which will require the closest co-operation of the government and the industry if the price structure is to be maintained.

There were 1,402,000 pounds of wool in this country on March 1, 1944, exclusive of British-owned wools, says the report, which estimates that this will be ample to supply American needs until next June. Requirements of this country are expected to be 1,140,000 pounds for this period.

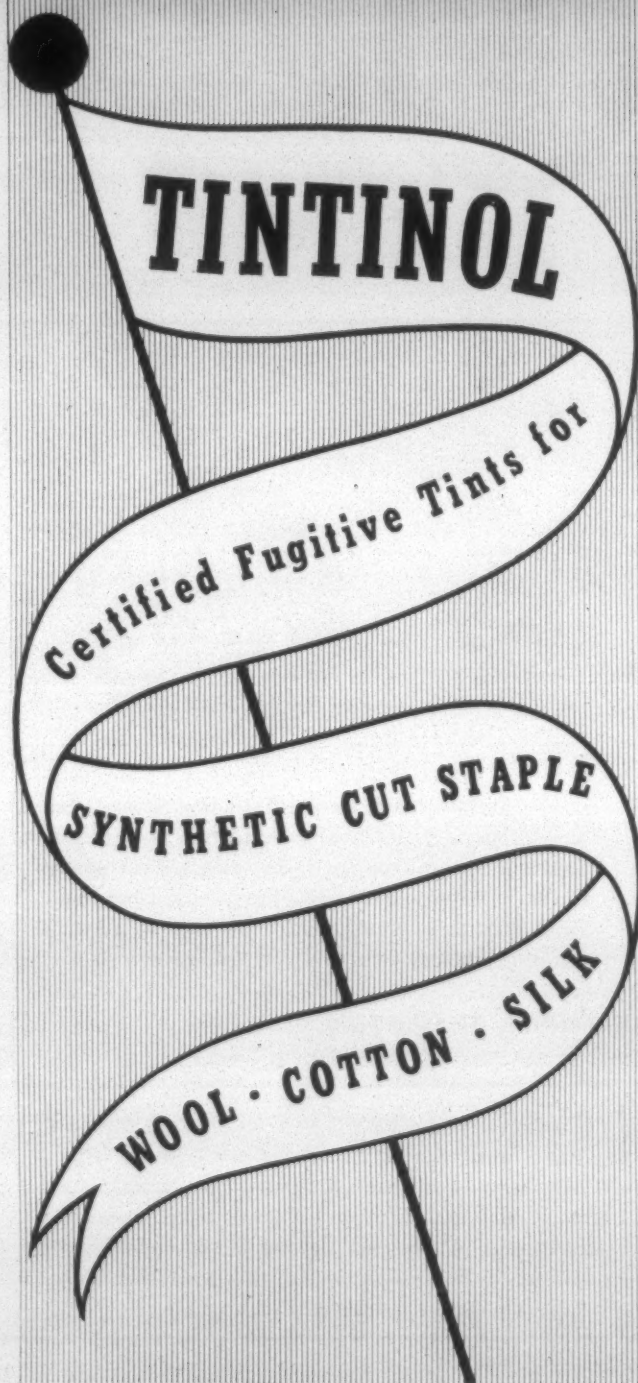
Disposal of the stock-pile, which was acquired as a war-time measure, has been complicated by soaring production costs and the wide price spread between United States and foreign wools, *The Index* explains. "With the inception of the second World War," says the report, "domestic wool prices advanced sharply by reason of government orders and in the fall of 1940 moved above the level of duty-paid foreign wools. At that time the government issued an order permitting the use of foreign wools in filling government contracts when domestic wools were not available. Costs to the wool growers began to increase; so did the War Department's demands for domestic production.

"The continued success of naval operations improved ocean shipping lanes and in August of last year the United States military authorities concluded that the wool stock-pile was no longer a strategic necessity. The decline in military requirements also indicated that part of the enormous wool reserve could be dispensed with. Military needs, which were 70 to 80 per cent of the total production capacity of the wool textile industry in 1941 and 1942, were reduced to 60 per cent in 1943.

"A favorable factor in the liquidation of surplus wool stocks in the period of readjustment will be the fulfillment of a large civilian demand all over the world. In the United States, with 11,000,000 men and women now in the armed forces—aside from the civilians who must replenish their war-restricted wardrobes—it is estimated that annual consumption of apparel wool in the United States will total 350,000,000 million scoured pounds for the period immediately following the end of hostilities. In comparison with total world stocks, however, the domestic market is expected to absorb only about 15 per cent of the total world accumulation, plus production in the three-year post-war period.

"Whether new markets being developed by the wool industry, in conjunction with its technical progress, are sufficient to absorb a vastly increased capacity is a question that cannot be answered conclusively at the present time. In spite of unprecedented wartime requirements, there were 2.18 linear yards of woollen goods per capita available for civilian consumption in 1943, as against 2.60 yards in 1937. With the industry's manufacturing and marketing skill clearly demonstrated in both peace and war, the future of wool will depend largely on the character of tariff regulations and governmental controls which are to be established in peacetime."

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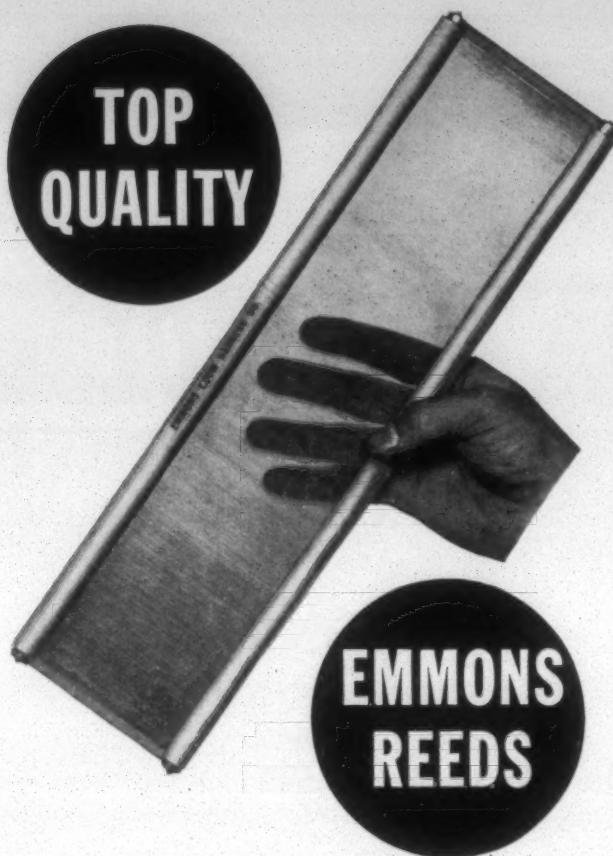
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Labor-Management Groups Encouraged

Almost 300 labor-management committees in the textile industry have been urged by officials of the War Production Drive, War Production Board, to redouble their efforts in production activities. The officials said that much of the success of the armed forces depends upon unlagging textile production.

"It is highly necessary," said T. K. Quinn, director-general of the drive, "that textile workers stick to their jobs, giving their best efforts to promote efficiency, safety, health and steady continuity of production. Labor-management co-operative production groups can perhaps do more good work along these lines than any other driving forces which can be called upon at this time to assume leadership."

Officials emphasized the importance of the textile goods now being manufactured for war purposes. Among the products are parachute cloth, parachute packs, cartridge cloth, uniform and overcoating cloth, mackinaw coats, aviation helmets, canteen covers, jungle suits, tents, blankets, bandages, surgical dressings, bags of all kinds, asbestos insulation, sisal and manila rope, tire cord fabric, sheets, underwear, jungle hammocks, brake linings, mosquito netting and camouflage netting.

It is encouraging, Mr. Quinn said, to note that the number of labor-management committees in the textile industry has increased four-fold during the last year. There are now 286 such efficiency production co-operative groups. While a large number of these are in the eastern part of the United States, many also exist in the Midwest and Far West, and at least 50 are in the South.

J. L. Alexander Joins Todd Firm

F. C. Todd, Gastonia, N. C., textile machine dealer, has sold a half interest in the machine department of F. C. Todd, Inc., to J. Leslie Alexander, for the past 14 years associated with Gastonia Roller, Spindle & Flyer Co. and Gastonia Brush Co. Prior to going to Gastonia, Mr. Alexander was for 15 years with Parks-Cramer Co. in Charlotte.

Mr. Todd will continue as president of the company, while Mr. Alexander will act as treasurer and general manager. The business is located at 627 East Franklin Avenue.

Industrial Rayon Seeking More Workers

Expansion of the Industrial Rayon Corp. plants at Cleveland and Painesville, Ohio, has brought about the necessity of recruiting more workers. In an effort to secure more employees two editions of the company's *Rayon News Reel* have been prepared, one for circulation at Cleveland and the other at Painesville. The four-page editions stress the importance of the firm's products in pictures and story, list advantages which Industrial employees have and furnish information regarding means of securing employment with the company.

A new eight-page bulletin which describes and illustrates in detail the mechanical and electrical types of speed indicating and speed recording Tachometers has been made available by Reeves Pulley Co. The products are offered as accessories for the Reeves Variable Speed Transmission, Vari-Speed Motor Pulley and Vari-Speed Motodrive control units. Copies may be secured by addressing Dept. T. B., Reeves Pulley Co., Columbus, Ind.

Industry's Support of Cotton Price Parity Hit By Mill Man

The future of the cotton textile industry is being hurt by establishment of cotton prices at parity, according to A. G. Heinsohn, Jr., president of Cherokee Spinning Co. at Knoxville, Tenn., and Spindale (N. C.) Mills, Inc. This artificial support of cotton will eventually have to accede to the natural law of supply and demand, said Mr. Heinsohn in a recent letter to Harrison Hightower, president of the American Cotton Manufacturers Association. The mill executive has refused to contribute five cents for every bale of cotton processed in his plants in order to support the National Cotton Council's program.

The council has been instrumental in pushing through this legislation, he charges, adding that mills have no obligation to support this plan because the council may have helped force higher cloth ceilings through the Office of Price Administration. Mr. Heinsohn condemns this latter theory as appeasement, and adds that this is something that this country needs less of now than ever. In his communication, Mr. Heinsohn says in part as follows:

"Instead of confining its activities to sales promotion, research, production and recovery of exports, the National Cotton Council of America has supported the scheme to push American cotton prices to a starry-eyed level known as 'parity' and in so doing gives the impression that the contributing cotton mills favor this imbecilic program.

"The higher the price of American cotton is forced above the world price by impractical schemes, the more disastrous will be the blow to the American cotton grower when the inevitable showdown comes. We will have no part in this blind program of selling the American cotton grower down the river."

Referring to the council's pamphlet, he says it "points out that today, because of the war, cotton consumption and cotton prices are high; it points out that 70 per cent of today's cotton consumption goes to the war effort; it points out that after the war the cotton grower faces a gigantic squeeze from rayon, wood pulp, jute and burlap; it brings out the fact that increasing amounts of cotton are now grown in 57 other countries; it graphically shows the falling off of American cotton exports; it graphically portrays the increase of world carry-over.

"In spite of knowing all these facts, the National Cotton Council helps cut the American cotton grower's throat by artificially boosting the price still higher, thus holding the door wider open for foreign growers to plant more acreage, and for rayon, wood pulp, jute and burlap to take more and more business away from cotton. How the foreign growers must be laughing up their sleeves; and what a break for the rayon, wood pulp, jute and burlap people.

"But does the council explain how American cotton artificially pegged at 22 cents a pound is going to outsell foreign cotton at 14 cents a pound? Does the council expect foreign users of cotton to pay this difference in price because the council publishes pictures to prove that the wives of 25 American governors wear cotton dresses?

"How long does the council think that the present plan of stealing tax money collected from all citizens in order to buy American cotton at 22 cents per pound, and then to turn around and resell millions of bales to foreign users at 14 cents a pound, can last?

"What does the council propose to do when American

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factory workers, American small business men, American officers workers and other American taxpayers wake up and learn that money wrung from them by taxes in order to win the war has been thus scattered to the four winds? When the American public refuses to pay taxes for this purpose, then where does that leave the American cotton grower? Right out on a limb with both his export and his home markets destroyed because you know full well that every cotton mill in America can handle rayon and will handle rayon if forced off cotton by this program.

"You presume that the cotton mills are obligated to support this farce because the council helped to force higher cloth ceilings through the OPA. Of course ceiling prices on cotton cloth must be adjusted, either up or down, when the artificially pegged price of raw cotton is changed."

Fiber Testing Facilities Set Up At Clemson

Through a co-operative arrangement with the textile school at Clemson College, S. C., a modern cotton testing laboratory has been made available to the division of technical service, Cotton-Textile Institute, according to an announcement by Dr. C. T. Murchison, institute president, and Dr. R. F. Poole, Clemson president.

The purpose of the laboratory is to make available to cotton mills facilities for training their laboratory workers in the technique of fiber testing. Many mills in recent years have established fiber research laboratories in connection with their cotton departments and quality control programs. A number, however, have had difficulty in securing trained personnel.

The Institute-Clemson laboratory is equipped to make fiber strength measurements, both round bundle and flat bundle; maturity tests, length distribution with the Suter-Wenn Sorter, and the Hertel Fibrograph, and fineness tests. In addition to a training program, the institute division has also in view a research program of value to mills.

It was also announced that Miss Helen Beasley has been appointed fiber technician for the institute division and will make her headquarters at the laboratory. Miss Beasley for the last four years has been associated with the fiber and research laboratories of the United States Department of Agriculture at College Station, Tex.

New Shuttles Now Being Developed

Due to the rapid application of new synthetic yarns for weaving, the engineering staff of the Southern Shuttles Division of Steel Heddle Mfg. Co. has recently been working to full capacity in designing and developing new shuttles to meet demands.

The latest product, Type SR-109, made for the Crompton & Knowles super-silk loom, has been scientifically engineered with many new and patented features. It is made with an extra long bobbin chamber for long metal base paper tube or bobbin. It has a patented synthetic rubber box which prevents bruises on the metal base of the tube. It is claimed that this shuttle prevents disturbing the yarn when inserting package on spindle and into the shuttle. The new product is reported to keep down sloughing and tangling of yarn and fit base of the tube perfectly. It does not scar the metal base or allow the yarn package to vibrate on spindle. It is equipped with the No. 626 R. B. Spindle with special levelling screw, has a top spring, and can be

used with any one of the many engineered spindles and tensions made by the firm.

The Southern Shuttles Division of Steel Heddle has its main plant and general offices at Greenville, S. C., and branches at Atlanta, Greensboro, N. C., Philadelphia, Providence and Woonsocket, R. I., and Montreal, Canada.

High Tenacity Rayon Producers May Seek Adjustments

Producers of 1,100 denier high tenacity rayon yarn subject to a War Production Board production order may file an application with the Office of Price Administration for an adjustment in the maximum price of such yarn, OPA has announced.

The action, effective Oct. 3, adds a provision to Maximum Price Regulation No. 167 which covers rayon yarn and staple fibers, allowing producers of 1,100 denier high tenacity rayon yarn to apply to OPA for an adjusted price under the directive issued by the Office of Economic Stabilization Nov. 16, 1943, known as the Vinson Directive.

In order to remove any impediment to the production of essential textile commodities, the Vinson Directive established a program that provided in part for the individual adjustment of ceiling prices by the Office of Price Administration when prices impeded the carrying out of WPB production orders.

Five producers now are subject to WPB production orders covering 1,100 denier high tenacity rayon yarn. Cost data available to OPA show that the maximum price of this yarn is high enough to give each producer, with one exception, more than his total cost of producing and selling this yarn. This one producer has submitted cost data to OPA that shows that his total cost of production is higher than the ceiling price. Therefore the present adjustment provision states that a price increase will be granted to any producer of this yarn if the existing maximum price is lower than the applicant's average total cost per unit of producing and selling the yarn computed on the basis of the applicant's total production of the yarn. In no case, however, will the new price be more than the applicant's total unit cost.

Piedmont A.A.T.C.C. Meeting Scheduled

The regular fall meeting of the Piedmont section, American Association of Textile Chemists and Colorists, will be held Nov. 3 at Charlotte, according to an announcement by Henry B. Dixon, chairman, and Leland G. Atkins, secretary. The speaker will be R. W. Arrington, president of Union Bleachery at Greenville, S. C. Following the address, an election of officers will be held. There will be no afternoon session.

Tickets for the dinner meeting, which will be at Hotel Charlotte, are now being sold by mail. Checks payable to Wyss L. Barker, treasurer of the section, will reserve tickets, and may be sent to Mr. Atkins at P. O. Box 1045, Charlotte 1, along with election ballots.

The slate of nominees for new officers is as follows: chairman, Sydney M. Cone; vice-chairman, Leland G. Atkins; secretary, John B. Neely; treasurer, Wyss L. Barker; councilors, Henry B. Dixon and Samuel L. Hayes; sectional committee, Roy J. Beauregard, L. J. McGinty, Ernest L. Caswell and James T. McGregor.



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Valuable Information Brought Out at A.A.T.C.C. Convention

(Continued from 30) — construction may be treated in the Mathieson steamer and, as the cloth is subjected to neither unbalanced tensile nor twisting stresses, delicate fabrics can be treated without danger of distorting the weaves, Mr. Carr said. He explained that time of steaming and volume of cloth can be varied, as required for best scouring results, by adjusting the speed of the conveyor in the steamer. When the steamer is used for any of the hot bleaching processes, the procedure is exactly the same as for scouring, the only variations being in the solutions used.

Douglas C. Newman, manager of the Charlotte office of DuPont's organic chemicals department, was in charge of the cotton group meeting. Cellulose deterioration in military fabrics was discussed by Henry A. Ruthenford and Milton Harris of the Textile Foundation. Alfred N. Henschel of United Merchants and Manufacturers Management Corp. dealt with the historical aspect of pigments and past application to textiles, attempts at improving dyeing and printing processes, and pre-war, current and post-war uses of pigment processes. "New Developments in Drying Cotton Piece Goods" was presented by C. Norris Rabold of Union Bleachery at Greenville, S. C. Vat colors received a good deal of attention at the meeting because of the wide demand for their fastness proper-

ties in military items. Lieut. R. S. Stribling of the Philadelphia Quartermaster Depot described "Recent Developments in the Application of Vat Dyestuffs."

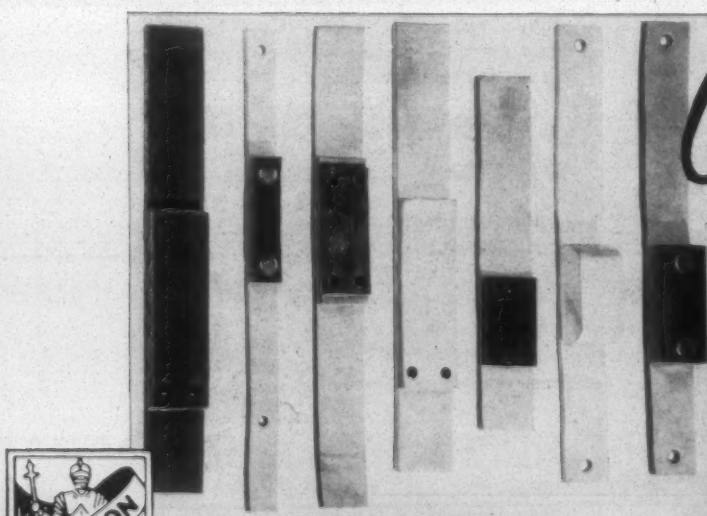
Two new vat dyeing processes, designed to permit the application of these durable colors to a much wider variety of fabrics than heretofore, were demonstrated by means of small working models set up at the DuPont exhibit on the Atlantic City Boardwalk for the benefit of those attending the annual meeting. They are being made available to the textile industry without cost, as part of the company's technical service, which directs its research toward simplifying and improving the application of its products.

The new processes, it is believed, will make possible the use of vat colors in a much wider variety of fabrics than ever before. These may include not only woolsens, but also the many blends of natural and synthetic fibers. One of the new methods has been named the pad-steam process. A final name has not yet been selected for the other, which operates on a multiple lap principle.

The pad-steam process was the outcome of combined work of a group in the DuPont technical laboratory and several field technicians who translated the laboratory development to commercial process. The method is designed to provide a simplified and more flexible continuous process which can be used economically for short as well as long yardages. In the operation of the

pad-steam process the fabric first passes through a conventional padder in which the pigment is applied, then dried in a flue dryer, after which it is carried over a cooling cylinder and down through a "chemical pad" consisting of a solution of sodium hydro-sulfite and caustic. The fabric now goes into the steam chamber, from which oxygen is carefully excluded, and is exposed there for a few seconds to a minute to a saturated steam atmosphere of 212° or slightly higher. Following the steaming the cloth is subjected to conventional oxidation, soaping, rinsing and drying.

The other machine was devised by William M. Wentz of the DuPont dyestuffs division in an effort to answer the mechanical aspect of the problem of handling delicate fabrics without undue distortion or crushing or without risk of fiber deterioration. With this multi-lap equipment the fabric is first padded and is then carried into an enclosed development bath or chamber. Here it travels on an endless slatted reel or conveyor, so arranged that the fabric is dipped into the bath on each trip around. Rolls are set at various depths in the bath to insure complete immersion on each lap, and at the end of the treatment the cloth turns a right angle over a diagonally placed bar to emerge from the center of the reel. In addition to continuous vat dyeing of short as well as long yardages, the machine appears adaptable to direct and acid colors on union fabrics, for acid and chrome



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colors on wool, for continuous stripping of material containing shoddy, for continuous bleaching or for continuous preparation of material prior to dyeing.

The testing session heard a number of pertinent talks. Dr. Jules Labarthe, Jr., of the Mellon Institute of Industrial Research, spoke on "Service Testing of Textile Material;" A. Griffin Ashcroft of Alexander Smith & Sons Carpet Co. discussed "Laboratory Tests as Indices of Quality in Textiles;" and Dr. Louis C. Barail of United States Testing Co. talked about "A Suggested Method for the Thorough Testing of Antiseptic Fabrics."

Others papers were delivered on such topics as wool dyeing and felting, military specifications, informative labeling, water impedant treatment and re-treatment, and deterioration of materials under tropical conditions.

The intersectional contest which was a feature of the annual meeting was won by the Rhode Island section of the organization, Kenneth H. Barnard of Pacific Mills, contest chairman, announced at the banquet Oct. 14. The Northern New England section was second and New York third.

The winning contest paper concerned factors affecting vat color printing and was prepared by Raymond W. Jacoby of Ciba Co. for the Rhode Island section. "The effect of shrinkage of physical properties of nylon" was presented by Walter J. Hamburger of Fabric Research Laboratories for the Northern New England section. "A study of the dimensional changes of rayon fabrics" was presented by Olen F. Marks of American Enka Corp. for the New York section. Among papers from the South were "Starch Fluidity," presented for the Piedmont section by V. B. Holland of Cannon Mills Co., and "Some Tendering and Non-Tendering Influences Commonly Present in Sulfur Dyeing," presented for the Southeastern section by M. T. Barnhill of Avondale Mills.

Prof. Louis A. Olney was the recipient of the first annual award of the Olney Medal for outstanding contributions to textile chemistry.

Banquet speakers included Senator Albert W. Hawkes of New Jersey, Brig-Gen. W. C. Kabrich of the Chemical Warfare Service, A. P. Howes, who made the Olney medal presentation, Boyce Bond, Philadelphia

section chairman, Dr. R. E. Rose and Dr. Olney. Toastmaster was P. J. Wood of Royce Chemical Co.

Statement of the Ownership, Management, Circulation, etc., Required by the Act of Congress of August 24, 1912 and March 3, 1933.

Of Textile Bulletin, published Semi-Monthly at Charlotte, N. C., for October 1, 1944.

State of North Carolina
County of Mecklenburg

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Junius M. Smith, who, having been duly sworn according to law, deposes and says that he is the Business Manager of Textile Bulletin and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section of March 3, 1933, embodied in section 537, Postal Laws and Regulations, to wit:

That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, Clark Publishing Co., Charlotte, N. C.; editor, David Clark, Charlotte, N. C.; business manager, Junius M. Smith, Charlotte, N. C.

That the owner is: Clark Publishing Co., Charlotte, N. C.

That the known bondholders, mortgagees and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: None.

(Signed) JUNIUS M. SMITH,
Business Manager.

(Signed) MARGARET L. ROBINSON,
Notary Public.

(My commission expires March 5, 1946.)

Sworn to and subscribed before me this 26th day of September, 1944.



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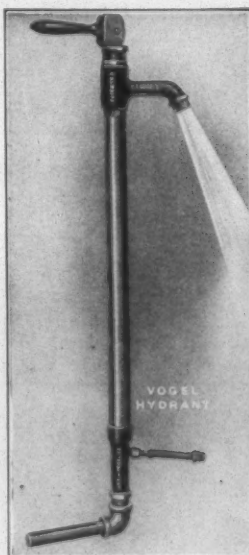


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Bobbin, Spool Price Increases Allowed

Manufacturers of textile bobbins and spools of the types made principally of wood may increase present maximum prices of such products to an amount not to exceed 14 per cent above their Oct. 1, 1491, base date prices for the same items, the Office of Price Administration has announced.

In addition to the industry-wide increases (effective Oct. 21, 1944) individual adjustments in excess of 14 per cent above their base date prices were granted to certain designated manufacturers who were found to be operating under extreme hardships, OPA said.

The increases follow and supersede an industry-wide increase of six per cent over base date prices granted in November, 1943, and an additional three per cent over the base date prices granted in June, 1944.

The present increases were granted following recent studies by OPA, which disclosed that additional price relief for manufacturers of bobbins and spools made principally of wood was necessary because of a continued decline of the industry's profits. Relief is particularly urgent for the industry at this time because of governmental demands for greatly expanded production of the types of bobbins and spools used in the manufacture of rayon cord for military tire needs, OPA said.

The textile bobbin and spool industry was a sub-marginal industry even before the present war, and its operating position, particularly during the last year, has become more difficult as a result of increased labor and material costs since the product prices were frozen Oct. 1, 1941.

Fabric Price Exemptions Extended

The price exemption period for four new constructions of cloth urgently needed for military use has been extended by one month, or until Nov. 1, 1944, by the Office of Price Administration.

This action covers the four combed fabrics that were first exempted from price control last May. This exemption period covered the first procurement by the Army of these wind-resistant, water-repellent Oxford materials made wholly of combed cotton yarns and used in sleeping bags and shelter tents. These fabrics had never before been woven in American mills and a lack of adequate information made it impossible to establish prices at that time.

OPA believed it would be possible to establish ceilings on these materials by Oct. 1. However, additional time is required to process the cost data and issue prices.

Ordinarily, the gray fabrics would be priced under Maximum Price Regulation No. 11 and the finished fabrics under Maximum Price Regulation No. 127. When the fabrics were exempted from price control last May they were removed from the coverage of these regulations. At that time, they were placed under the coverage of Maximum Price Regulation No. 157, exempting them from price control until Oct. 1, upon certification by sellers conforming with the requirements of that regulation.

A.S.T.M. Book of Standards Advanced

Heavy demands for the 1942 Book of A.S.T.M. Standards and its supplements occasioned by war production efforts have necessitated advancing by a full year publication of the next book by the American Society of Testing Materials. Normally this would come out in November.

December, 1945, on the triennial basis, but the book will be issued in December of this year. Very widely used by American industry, this book will provide authoritative specifications and tests for a wide range of engineering materials and will cover some 6,000 pages.

M. Weldon Rogers Is Elected President of Southern Textile Assn.

(Continued from Page 13)—personality, or combination of strength, stiffness, toughness, resilience, etc. The advent of rayons and other manufactured fibers, he said, has given the textile designer a wider range of fiber personalities from which to choose in creating textiles for specific uses.

Dr. Smith showed that the mechanical properties of fibers are basic, not only in performances displayed in industrial and military textiles, but also in the subjective evaluation of textile quality in apparel and household textiles because the strength, stiffness, resilience, etc., of the fibers are reflected in the hand, drape and wearability of the fabric.

This recognized authority on textiles made the annual Marburg Lecture before this year's meeting of the American Society of Testing Materials at New York June 28. His Marburg Lecture, entitled "Textile Fibers—An Engineering Approach," was used as the basis for his address at Charlotte. Dr. Smith is in charge of the sales service department of A. M. Tenney Associates, Inc., sole sales representative for Eastman acetate rayon. He is vice-president of the Textile Research Institute and is deeply interested in the furtherance of fundamental knowledge about textiles as the best basis in which to utilize each of the fibers to its best advantage.

The morning session was concluded with the nominating committee's report and subsequent election of new association leaders.

The luncheon session featured Maj. B. M. Golder of Selective Service headquarters, Washington, who presented much valuable information on problems incurred in re-hiring veterans of military service. Major Golder answered a number of questions regarding the legal responsibilities of firms toward former employees now in uniform, and stressed the fact that in many cases management of mills will have to be guided by conscience rather than strict interpretation of existing laws.

Mr. Cobb presented the newly-elected association officers at this session, and was himself given the customary past president's medal. The S. T. A. associate members division, following the usual custom of doing everything possible to make the annual convention successful, distributed war stamp prizes among the mill men and suppliers' representatives present. Prize winners were selected by drawing numbers given out upon registration. John C. Turner of Atlanta, chairman of the associate members division and representative for W. D. Dodenhoff Co. of Greenville, S. C., was in charge of prize distribution.

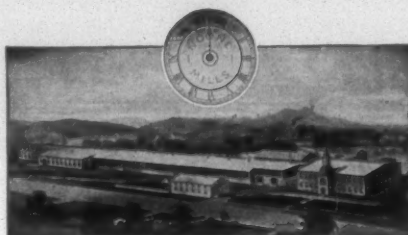
Prior to the regular convention associate members also met at Hotel Charlotte and re-elected Mr. Turner chairman. Other officials of this division continued in office for another term. They are Falls L. Thomason (New York & New Jersey Lubricant Co.), Charlotte, first vice-chairman; Claude B. Iler (Keever Starch Co.), Greenville, second vice-chairman; and Junius M. Smith (TEXTILE BULLETIN), Charlotte, secretary.

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The Retiring President Looks at the S.T.A. Past and Future

(Continued from Page 14)—task that lies ahead. Of all the essential industries in this vast war production program, ours has had less governmental help than any other. There have been no fat cost-plus contracts, no governmental aid in the training of skilled textile workers. In fact, you have seen and experienced just the opposite. You have seen your experienced loom fixers, card grinders, frame fixers and other skilled help encouraged to be trained at government expense and go to war plants manufacturing on cost-plus basis and having perhaps a more favorable status in regard to deferment of essential workers. This has made your task doubly hard. You have met the armed forces' increased needs by training program set up and operated by your own organization, and at your company's expense. You have utilized green and handicapped workers. Many times you have made makeshift repairs for lack of materials. You and your organization have borne the extra duties imposed upon you, as your patriotic duty; many times when you were understaffed, but at the same time the mills which you represent have produced the goods.

The war is not over. We have huge demands, both military and civilian, for textile goods still to meet. Ahead of us lies the task of placing and adjusting the returning veterans to their jobs, and at the same time anticipating and making the necessary technical changes so as to enable your plants to maintain their competitive positions. Ours is a position of grave responsibility. We will meet it. Our association stands ready to offer its aid and help in this tremendous job which lies ahead.

Yes, today our industry is producing the goods to aid in winning for the world the four freedoms and the right of people to remain individuals. Also, this industry is producing the goods to bind the wounds and clothe and shelter those people who are being freed from the crushing hell of Japan and Germany. Yes, ours is an industry that is both a war industry and peace industry. May God speed the day when this, our industry, can turn from war goods and produce the goods of peace and better living.

"Unopened Cases or Bales" Defined

To assist persons required to report stocks of rayon yarns and staple fiber under Conservation Order M-37-d, the rayon yarn order, the War Production Board has clarified the definition of "unopened cases and bales" as it pertains to order. "Unopened cases or bales mean all yarn that is not in the process of being knit or woven, but includes yarn that is in transit to or from a throwster or at the throwster's, if the yarn is owned or controlled by the person filling out the form," WPB officials ruled. All persons entitled to receive rayon yarn through WPB allocation are required to report monthly receipts, consumption and inventories of all rayon yarn on Form WPB-3858.

A. C. Lawrence Leather Co. has made a suggestion award of \$800 in cash plus a \$100 war bond to Charles Ashbolt of the firm's Winchester, N. H., tannery. The Lawrence suggestion plan is showing a nice gain this year as compared to last year, both in quantity received and percentage accepted. Bond prizes are supplementing regular awards for the best suggestion contributed each month.

New Sjostrom Machine Assists Production of Textile Items

A new machine for feeding, cutting and stacking towels, napkins, tablecloths, etc., with woven or printed patterns has recently been introduced and placed on the market by Sjostrom Machine Co. of Lawrence, Mass. United States Patent No. 2,346,194 covering various features of this machine has been granted to Robert L. Sjostrom, president of Sjostrom Machine Co.

Mr. Sjostrom points out that their original automatic machine was for cutting plain towels, napkins and other types of plain piece goods. But most towels and napkins have patterns either woven in on the loom or printed on the goods and up the introduction of this new machine, each piece had to be cut individually. The reason for this was because the patterns never come in exactly the same place and in many cases the cloth was "bowed" which meant that the operator's shears or electric knife had to follow the thread.

Three electric eyes control the mechanism of this pattern towel machine. The operator stands in one position, the exact point of cutting is fed by, is cut and the cut pieces continue on conveyor belts and are stacked in even bundles of 100, 200 or any other pre-determined number regulated by an electric counter. Production on napkins runs as high as 18,000 per ten-hour day for each operator, and production on towels is approximately the same. In checking the three installations which have been made it was found that the production of the machine was sufficient to release for other work, two operators for each shift. That is, one girl with the machine produces the same amount of cut pieces as three girls without the machine.

Dyestuff Research Laboratory Is Set Up

To assist textile converters and finishers who are licensees under the American Viscose Corp. "Crown" Tested Plan, the company has established a dyestuff research laboratory in its New York offices. Under the "Crown" Tested Plan, fabrics made by licensees that contain American Viscose Corp. rayon are subjected to numerous tests for consumer serviceability. One of the principal reasons for establishing the dyestuff laboratory is to simplify and speed up the procedure of testing dyed and finished fabrics to determine whether or not they will meet the standards of the "Crown" Tested Plan. Another objective is to develop dye formulas that meet "Crown" Tested Plan specifications, which can be made available to converter and finisher licensees operating in co-operation with the plan.

Officials of the textile machinery branch of the War Production Board have requested all textile mills requiring attachments for existing machinery in order to comply with Direction Two to Limitation Order L-99 to place their orders with suppliers at once. The request was made to expedite the conversion of various types of textile machinery to the production of tent twills and flat duck.

Thus, suppliers will be able to place their orders for parts or obtain the necessary basic materials for their fabrication with WPB priorities assistance where necessary. Due to the critical shortages of cotton duck, every effort is being made to convert all possible looms to tent twill and flat duck production at the earliest possible moment, WPB said.

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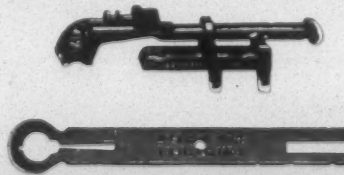
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OBITUARY

Oscar M. Bundy, 66, secretary and treasurer for Oakdale Cotton Mills at Jamestown, N. C., died recently in a High Point, N. C., hospital following an illness of three weeks. He had been associated with the firm for a number of years. He leaves his widow, four daughters, two sons and a sister.

LeRoy H. Brown, for many years treasurer of I. B. Williams & Sons, leather concern at Dover, N. H., died recently. Survivors include his widow, a son and his father.

David M. Carpenter, 86, president and general manager of the old Maiden (N. C.) Cotton Mills and later head of Union Mills, died recently at his home in Maiden.

Isaac C. Lowe, 77, one of the founders of American Yarn & Processing Co., Mt. Holly, N. C., died this month at Charlotte after a critical illness of ten days. He is survived by his widow and a son.

Dr. Jesse W. Fox, 77, internationally known cotton expert, died this month at Greenville, Miss. For 32 years he served as general manager of Delta & Pine Land Co. at Scott, Miss.

Dr. Fin Sparre, 65, a director of E. I. du Pont de Nemours & Co. and for 25 years director of its development department until his retirement last August, died of a heart attack at Wilmington, Del., this month. He had been connected with DuPont 41 years. Survivors include his wife, three sons and two daughters.

P. E. Herman, 75, retired salesman for the organic division of Monsanto Chemical Co., died Sept. 23 at Cincinnati, Ohio. He had at times covered various sections in the South. Surviving are two sons.

Lieut. Luke W. Boney, Jr., 26, formerly of S. Slater & Sons, Inc., at Slater, S. C., and Carter Fabrics Corp. at South Boston, Va., was killed in action in France Aug. 7. He entered the Army in 1941. He is survived by his parents and a sister.

Lieut. Wallace W. Riddick, Jr., 25, formerly of Lexington (N. C.) Silk Mills, was killed in action in France Sept. 1. He began Army service in 1942. Survivors include his wife, parents, a sister and a brother.

William P. Hornbuckle, 74, chief technician for Gaston County Dye Machinery Co. of Stanley, N. C., lost his life in a hotel fire at Anniston, Ala., recently. He managed to escape from the burning building, but died of injuries in an Anniston hospital later.

Experiences in Use of Nylon To Open Many New Fields

Military applications of nylon developed during the war suggest possible uses for this versatile synthetic yarn in civilian fabrics, George J. Groh of the nylon division, E. I. du Pont de Nemours & Co., told the American Association of Textile Technologists at New York this month. Mr. Groh, in charge of nylon fabric development, said that, for example, the weaving of nylon insect netting has given the textile industry experience in handling the yarn, which might be utilized later on in the weaving of similar fabrics for many uses.

"A 30 denier nylon flare (parachute) fabric is not far in construction from a nylon sheer," he pointed out, adding that "with some minor changes in weaving and a few more turns in the yarn, a fabric might be developed which should have a large number of practical uses." The nylon fabric which is now going into the human escape parachute by being built up slightly in construction might suggest a sleeve lining, Mr. Groh added.

Development of woven nylon fabrics was undertaken before the war in a limited way and all work of this kind was stopped as soon as nylon was needed for military purposes, he explained. The early studies were carried far enough in the development of fabrics for underwear, slips, panties, gowns and foundation garments to indicate that nylon contributed a great deal toward lessening the weight of garments, he said, and its advantages in easy washing and quick drying were found particularly valuable.

Experimental work before the war also indicated that properly constructed fabrics of nylon could be permanently "set" to minimize wrinkling and that they might possess advantages in washability. This work gave definite indications that good nylon neckwear could be manufactured, that nylon in velvets and other pile fabrics could be made crush-proof, that the curtain stretcher as a result might "become a thing of the past" and that permanent ruffles and pleats might be "set" so as to be unaffected by cleaning and even washing.

Steam pressure, under which nylon stockings are given permanent size and shape, was used to good advantage in "setting" lightweight fabrics during the pre-war period of research, said Mr. Groh. Some experimenting was done with dry heat, employing temperatures of 425 to 435° F., resulting in "an improvement in the softness or 'hand' of the fabric, better draping qualities and improved resilience" as compared to the steam set material, he reported.

"Up to the present time," Mr. Groh said, "all development work in the fabrics field has been carried on with one nylon only. Also, up to the present time, practically all fabrics made have been from yarns with relatively coarse filaments. Finer filament yarns, as well as coarser filament yarns, have been developed to meet military fabric needs, and from results already available we know that these yarns will go a long way toward improving the 'hand' and texture of many post-war fabrics."

Mr. Groh stated a belief "that several different effects can be obtained from the same fabric construction by employing different finishing methods. Starting with the hosiery experience and supplemented with the information developed from military fabrics, there has been built up a well-rounded knowledge of the fundamental properties of nylon."

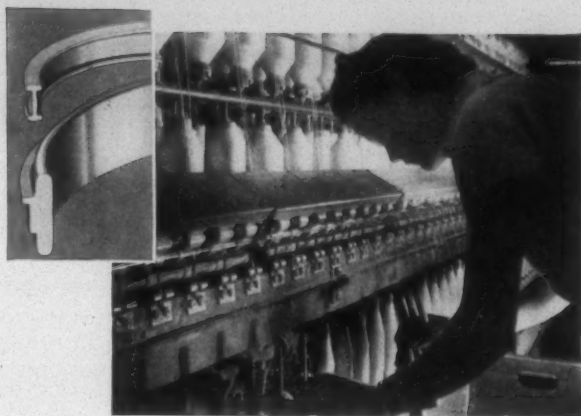


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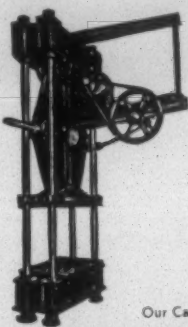
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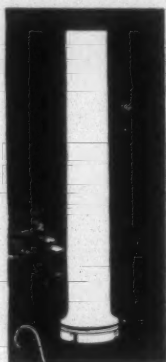
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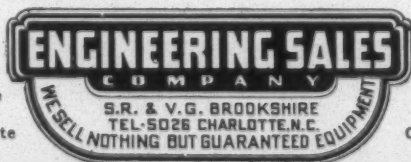
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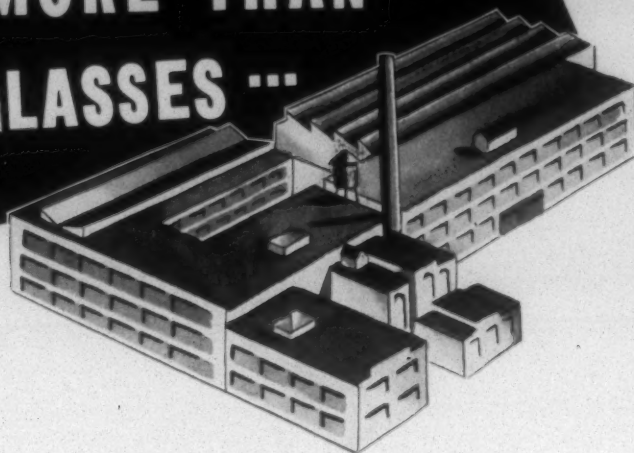
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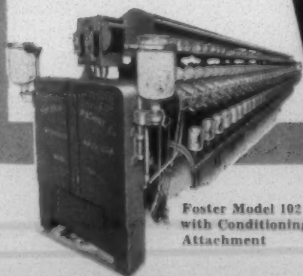
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